March 22, 2022

Submitted via Regulations.gov

Dr. Michal Freedhoff
Assistant Administrator, Environmental Protection Agency
Office of Chemical Safety and Pollution Prevention
1200 Pennsylvania Ave. NW
Washington, DC 20460-0001

Re: Comments on Draft Toxic Substances Control Act Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities Version 1.0, Docket No. EPA-HQ-OPPT-2021-0415

Dear Assistant Administrator Freedhoff:

The undersigned organizations submit these comments on the Environmental Protection Agency's ("EPA's") Draft TSCA Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities Version 1.0 (the "Fenceline Assessment Approach").[1] The signatories include organizations that advocate for equitable and health-protective chemical regulation; coalitions dedicated to environmental justice; and communities where vast amounts of chemicals are manufactured, used, disposed of, and released. Every day, communities near polluting facilities and contaminated sites are exposed to toxic chemicals in the air they breathe; the water they drink; the soil they live, play, and grow food on; and other sources. We support EPA's decision to consider impacts to fenceline communities when evaluating and regulating chemicals under the Toxic Substances Control Act ("TSCA"), a change which is needed to comply with TSCA and to fulfill the Biden Administration's environmental justice commitments.[2]

As currently drafted, however, the Fenceline Assessment Approach fails to account for many of the ways that fenceline communities are exposed to and harmed by chemicals, and thus understates the harm that residents of those communities face. EPA's Fenceline Assessment Approach does not consider risks to communities that are exposed to a chemical from more than one facility, or that are exposed to multiple chemicals with cumulative effects. Nor does it consider the risks to communities that are exposed to chemicals from the groundwater, soil, or deposition of air pollution. EPA ignores existing levels of pollution within fenceline communities and socioeconomic factors that increase the harm that those communities experience from their chemical exposures. EPA relies on incomplete and unverified estimates of chemical releases, and it does not consider the impacts of chemical accidents, reasonably foreseeable natural disasters, and other peak emission events. When calculating the risks to fenceline communities, EPA proposes to continue relying on the Trump Administration's flawed chemical toxicity assessments. These flaws

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[1] *See* EPA, Document No. EPA-744-D-22-001, *Draft TSCA Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities Version 1.0* (2022), https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0415-0012 (click "Download") ("Fenceline Assessment Approach").

[2] *See* Exec. Order No. 14,008, 86 Fed. Reg. 7619, 7629 (Jan. 27, 2021) (calling on federal agencies to "make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, . . . and other cumulative impacts on disadvantaged communities").

are particularly concerning given EPA's use of the Fenceline Assessment Approach as a "screening level methodology,"[3] since any risks that are not identified at the screening stage will not be further studied or considered by EPA, but will rather be assumed not to exist.

We support EPA's regulation of the chemicals that are threatening fenceline communities, and we do not believe that changes to the Fenceline Assessment Approach should delay needed regulation. Nor should EPA delay the implementation of improvements to its draft approach that can be made today, with existing information and resources. EPA is currently using the Fenceline Assessment Approach to evaluate risks from six highly toxic chemicals that are released and present in communities across the country. To ensure that EPA's regulations of those chemicals are well supported and to inform EPA's risk management analyses, our comments recommend near-term improvements to the Fenceline Assessment Approach that EPA can implement without reopening the underlying risk evaluations or delaying the regulation of those chemicals. We also recommend broader improvements that EPA should incorporate before the Fenceline Assessment Approach is used in any future risk evaluations. We look forward to working with EPA to implement these recommendations, which will result in fenceline assessments that are scientifically supported, legally compliant, and that reflect the real-world risks that fenceline communities across the county experience.

A. EPA Did Not Involve Fenceline Communities in the Preparation of the Fenceline Assessment Approach; It Must Do So Moving Forward.

To understand and assess chemical exposures and risks in the communities where toxic chemicals are manufactured, used, released, or disposed of (referred to herein as "fenceline communities"),[4] EPA must reach out to and consult with residents of those communities. When developing Version 1.0 of the Fenceline Assessment Approach, however, EPA failed to do so.

EPA drafted that document without any public consultation with the communities whose risks EPA is attempting to measure. It released a 200-page, highly technical draft of the Fenceline Assessment Approach without a non-technical summary, limiting the ability of the affected communities to fully participate in the public comment period. Despite multiple requests, EPA has yet to provide that summary. Compounding the obstacles to community engagement, EPA scheduled the public comment portion of the TSCA Science Advisory Committee on Chemicals' meeting on the Fenceline Assessment Approach at the same time as EPA's National Environmental Justice Community Engagement call, forcing communities to choose between the two. This is not the "meaningful involvement" for communities envisioned by EPA's environmental justice strategic plan.[5]

EPA has said that it "plans to expand this first version of the [Fenceline Assessment Approach]" to address issues like "environmental justice concerns and cumulative or aggregate

[3] Fenceline Assessment Approach, *supra* note 1, at 9.
[4] As described below, the draft Fenceline Assessment Approach adopts a narrower definition of a "fenceline community" that excludes many of the ways that communities are exposed to toxic chemicals. *See* Fenceline Assessment Approach, *supra* note 1, at 9 (defining "fenceline communities" to include only communities who (1) are proximate to facilities that release the chemical undergoing risk evaluation to the air or (2) "may intereact with" surface water bodies that receive releases of the chemical).
[5] EPA, *EJ 2020 Action Agenda* 1, 55 (2016), https://www.epa.gov/sites/default/files/2016-05/documents/052216_ej_2020_strategic_plan_final_0.pdf.

exposures to chemicals."[6] We believe those changes are necessary, but in order to ensure the next version truly reflects fenceline community experiences, it is not enough for EPA to focus on substantive shortcomings of Version 1.0. EPA must also adopt a fundamentally different process, including broader and earlier engagement with impacted communities, consultation with the National Environmental Justice Advisory Committee ("NEJAC") and White House Environmental Justice Advisory Committee ("WHEJAC"), and the publication of non-technical summaries at or before the start of any future comment period.

B. TSCA Requires the Comprehensive Evaluation of Fenceline Communities' Exposures and Risks.

TSCA is designed to ensure EPA identifies, and then eliminates, the unreasonable risks of injury from chemicals faced by fenceline communities. When TSCA was adopted in 1976, then-existing environmental laws were found to be "clearly inadequate" to address the "serious risks of harm" to public health from toxic chemicals.[7] Congress recognized that "we have become literally surrounded by a man-made chemical environment" and "too frequently, we have discovered that certain of these chemicals present lethal health and environmental dangers."[8] TSCA was adopted because other federal environmental laws had failed to adequately address the risks associated with chemicals, and those other laws' exclusive focus on specific media, such as air or water, left "regulatory gaps"[9] and did not address cumulative exposures across multiple pathways. To address the full array of risks from chemicals, TSCA authorizes EPA to "look comprehensively" at the hazards of a chemical "in total,"[10] considering "the full extent of human or environmental exposure."[11] Congress was explicit that this meant consideration of cumulative risk. It stated: "Oftentimes an unreasonable risk will be presented because of the interrelationship *or cumulative impact* of a number of different substances or mixtures. The conferees intend that the Administrator have authority to protect health and the environment in such situations."[12] However, despite the ambitious goals, the 1976 law proved ineffective at reducing risks to public health from toxic chemicals existing in commerce and this was not addressed until the 2016 reform law was adopted.

Both the legislative history and the plain language of the 2016 overhaul of TSCA confirm Congress's intent that EPA must use its TSCA authority to truly protect fenceline communities from the full array of real-world chemical risks they face. As one of the bill's co-sponsors stated: "The [legislation] will go a long way towards ensuring that all American families—especially for families of chemical facility workers and fence line communities . . .—are protected from potentially harmful chemicals."[13] The reformed TSCA explicitly requires EPA to evaluate risks

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[6] *EPA Releases Screening Methodology To Evaluate Chemical Exposures and Risks To Fenceline Communities*, EPA (Jan. 21, 2022), https://www.epa.gov/newsreleases/epa-releases-screening-methodology-evaluate-chemical-exposures-and-risks-fenceline.
[7] H.R. Rep. No. 94-1341, at 7 (1976).
[8] S. Rep. No. 94-698, at 3 (1976).
[9] *Id.* at 1.
[10] *Id.* at 2.
[11] H.R. Rep. No. 94-1341, at 6 (1976).
[12] H.R. Rep. No. 94-1679, at 61 (1976) (Conf. Rep.) (emphasis added).
[13] 161 Cong. Rec. 10,257 (2015) (statement of Rep. Gene Greene); *see also* Remarks on Signing the Frank R. Lautenberg Chemical Safety for the 21st Century Act, 1 Pub. Papers 795 (June 22, 2016), https://www.govinfo.gov/content/pkg/PPP-2016-book1/pdf/PPP-2016-book1-doc-pg795.pdf ("[T]his law will help protect Americans, especially those who are particularly vulnerable to chemicals, and that includes children and pregnant women and the elderly and poorer communities.").

presented by chemical substances across their full life cycle (manufacture, processing, distribution, use, and disposal); across all routes (air, water, soil, dust, consumer products, and occupational settings); and via all pathways (inhalation, ingestion, and/or dermal exposure).[14] If EPA determines that the chemical presents an "unreasonable risk of injury" from these exposures—in "any combination"—it must promptly adopt rules that eliminate that risk.[15] The text of TSCA confirms that EPA's risk evaluation and risk management processes must consider and address the real-world risks to fenceline communities.

First, when conducting risk evaluations under TSCA, EPA must determine whether a chemical presents unreasonable risk to any "potentially exposed or susceptible subpopulation," which is defined as a group that "may be at greater risk than the general population" due to greater chemical exposures, greater susceptibility, or both.[16] Residents of fenceline communities must be considered a "susceptible subpopulation" because they face greater chemical exposures due to their proximity to polluting facilities and contaminated sites, and they often experience greater harm from those exposures due to their cumulative exposures to multiple chemicals as well as other non-chemical stressors such as poverty and racial discrimination.[17] If EPA determines that a "susceptible subpopulation," including a fenceline community, faces unreasonable risk, it must adopt rules that eliminate that community's unreasonable risk, even if the general population does not face unreasonable risk.[18]

Second, TSCA requires EPA to evaluate and regulate chemicals "in a manner consistent with the best available science."[19] As discussed more fully below, the best available scientific protocols and methodologies for conducting risk assessments require consideration of all exposure pathways, taking into account background, aggregate, and cumulative exposures, as well as increased susceptibility to harm.[20]

Third, TSCA requires that when EPA conducts a risk evaluation, it must "integrate and assess available information on hazards and exposures for the conditions of use of the chemical substance" and "take into account, where relevant, the likely . . . number of exposures under the conditions of use."[21] Pursuant to these mandates, as well as TSCA's direction that EPA eliminate the risks posed by "any combination of" conditions of use,[22] EPA must consider fenceline communities' comprehensive, real-world risks resulting from exposures to chemicals.

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[14] 15 U.S.C. § 2605(b)(4)(A) (requiring EPA to "to determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation . . . , under the conditions of use "); *id.* § 2602(4) (defining "conditions of use").
[15] *Id.* § 2605(a).
[16] *Id.*. § 2605(b)(4)(A) (mandating determination of unreasonable risk to potentially exposed or susceptible subpopulations); *id.* § 2602(12) (defining "potentially exposed or susceptible subpopulation").
[17] *See infra* Sections D.i–D.iii.
[18] 15 U.S.C. § 2605(b)(4)(A) (mandating determination of unreasonable risk to potentially exposed or susceptible subpopulations); *id.* § 2605(a) (mandating that EPA adopt rules so that substances no longer present unreasonable risk).
[19] *Id.* § 2625(h).
[20] *See infra* Sections D.i–D.iii, D.v.
[21] 15 U.S.C. § 2605(b)(4)(F)(i), (iv).
[22] *Id.* § 2605(a).

C. The Biden Administration's Environmental Justice Commitments Also Require EPA to Consider and Address the Actual Risks Facing Fenceline Communities.

In addition to TSCA, the Biden Administration's environmental justice commitments also require EPA to account for fenceline communities' real-world exposures and risks when evaluating and regulating chemicals. President Biden's January 27, 2021, executive order on climate change and environmental justice establishes the "policy of [this] Administration to secure environmental justice . . . for disadvantaged communities that have been historically marginalized and overburdened by pollution."[23] To achieve that policy, the order calls on all agencies to "make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, . . . and other cumulative impacts on disadvantaged communities."[24] EPA Administrator Michael Regan has made environmental justice a "top priorit[y]," stating that the agency "must do better" to address the "disproportionately high pollution levels and the resulting adverse health and environmental impacts" in fenceline communities.[25] EPA cannot redress environmental injustice in fenceline communities unless those communities' real-world risks are considered.

The fact that risks to fenceline communities present environmental justice concerns cannot be questioned. Residents of fenceline communities are more likely to be people of color. Numerous studies have shown that hazardous waste facilities, oil and gas wastewater disposal wells, and other polluting facilities are more likely to be located in and around communities of color.[26] Moreover, due to discriminatory land use policies, inequitable siting practices, and other forms of environmental racism, people of color and Indigenous peoples are more likely to live in neighborhoods with multiple polluting facilities clustered close together, putting them at greater risk of harm from exposures to chemicals from multiple facilities. Neighborhoods near clustered hazardous waste facilities are nearly 70% people of color, as compared to 51% in neighborhoods near non-clustered facilities.[27] And, these staggering statistics only reflect a small portion of the types of facilities that pose threats to fenceline communities.

In addition, residents of fenceline communities are likely to experience income inequality, healthcare inequity, food insecurity, and disproportionate burdens of underlying disease, which increase their susceptibility to harm from chemicals released by nearby polluting facilities.[28] EPA

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[23] Exec. Order No. 14,008, 86 Fed. Reg. 7619, 7629 (Jan. 27, 2021).
[24] *Id.*
[25] *EPA Administrator Announces Agency Actions to Advance Environmental Justice*, EPA (Apr. 7, 2021), https://www.epa.gov/newsreleases/epa-administrator-announces-agency-actions-advance-environmental-justice.
[26] Robert D. Bullard et al., United Church of Christ, *Toxic Wastes and Race at Twenty 1987—2007,* at 54 (2007), https://www.ucc.org/wp-content/uploads/2021/03/toxic-wastes-and-race-at-twenty-1987-2007.pdf (reporting that 56% of the nine million people living within three kilometers of a commercial hazardous waste facility were people of color); Jill E. Johnston et al., *Wastewater Disposal Wells, Fracking, and Environmental Injustice in Southern Texas*, 106 Am. J. Pub. Health 550 (2016), https://pubmed.ncbi.nlm.nih.gov/26794166/ (finding that oil and gas wastewater disposal wells are more than two times more common in areas with at least 80% people of color than in predominantly white communities); Jane Kay & Cheryl Katz, *Pollution, Poverty and People of Color: Living with Industry*, Sci. Am. (June 4, 2012), https://www.scientificamerican.com/article/pollution-poverty-people-color-living-industry/.
[27] Robert D. Bullard et al., United Church of Christ, *Toxic Wastes and Race at Twenty 1987—2007,* at 54 (2007), https://www.ucc.org/wp-content/uploads/2021/03/toxic-wastes-and-race-at-twenty-1987-2007.pdf.
[28] Ronald White et al., Env't Just. Health All. for Chem. Pol'y Reform et al., *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities* (2018), https://ej4all.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf.

cannot "secure environmental justice" for fenceline communities unless it fully accounts for their exposures and risks, including risks from cumulative exposures and the impact of stressors, such as income inequality and racial discrimination, on chemical susceptibility.

D. The Fenceline Assessment Approach Does Not Comprehensively and Accurately Reflect Fenceline Communities' Exposures and Risks.

In violation of TSCA, EPA ignored community exposures when conducting the first ten risk evaluations under the 2016 TSCA amendments. Those initial risk evaluations excluded environmental releases that were or could be regulated under other environmental laws, and thus, they failed to consider the risks that fenceline communities experience from chemicals in their air, water, and soil. We agree with, and appreciate, EPA's decision to revisit many of those exclusions and to evaluate chemical exposures to communities surrounding polluting facilities.

In order to comply with TSCA and to eliminate unreasonable risks to fenceline communities, the Fenceline Assessment Approach must accurately capture those communities' exposures and risks. This is particularly important given EPA's intended use of the Fenceline Assessment Approach as a "screening" tool, which can be used to support a finding that a chemical does not present unreasonable risk to a fenceline community and to justify the absence of any regulatory action under TSCA.[29] But the Fenceline Assessment Approach lacks the fundamental characteristic of a "screening-level assessment," which, according to EPA's own practice, must adopt "conservative assumptions" that "estimate a high-end exposure."[30] As explained below, the Fenceline Assessment Approach is neither "conservative" nor a "high-end" estimate of exposures. Rather, given its limited scope, it is likely to underestimate fenceline community exposures and to improperly screen out unreasonable risks experienced by fenceline communities.

EPA itself has acknowledged many of these shortcomings, expressing "plans to expand this first version of the framework" to address issues like aggregate and cumulative exposures in future risk evaluations.[31] We agree that changes to EPA's Fenceline Assessment Approach are needed, but EPA cannot wait until future risk evaluations to begin implementing them. EPA is using the Fenceline Assessment Approach to evaluate risks from at least six toxic chemicals that are released and present in communities across the country. To inform and support the regulation of those chemicals, EPA must make near-term changes to the Fenceline Assessment Approach while it pursues longer-term expansions.

These issues discussed below have real impacts on people in fenceline communities across the country; if EPA does not fully measure exposures and risks, then EPA will not be able to ensure that its chemical regulations eliminate unreasonable risk to those communities. These comments provide examples of how the decisions made in the Fenceline Assessment Approach exclude or understate the risks to different communities. All such references are provided as examples only;

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[29] *See* Fenceline Assessment Approach, *supra* note 1, at 19 (describing "Outcome 1").
[30] *Exposure Assessment Tools by Tiers and Types - Screening- Level and Refined*, EPA, https://www.epa.gov/expobox/exposure-assessment-tools-tiers-and-types-screening-level-and-refined#tool (last updated Dec. 13, 2021).
[31] *EPA Releases Screening Methodology to Evaluate Chemical Exposures and Risks to Fenceline Communities*, EPA (Jan. 21, 2022), https://www.epa.gov/newsreleases/epa-releases-screening-methodology-evaluate-chemical-exposures-and-risks-fenceline.

many communities not mentioned herein are impacted by those same shortcomings, and many of the communities that are mentioned are impacted by more than one of the issues discussed below.

i. EPA does not consider risks to communities exposed to the same chemical from multiple facilities.

In its Fenceline Assessment Approach, EPA "focused on the potential impact of a single release source (air or water release) for a given condition of use," without considering the risks to communities that are impacted by multiple facilities releasing the same chemical.[32] This approach effectively assumes that community residents will only be exposed to a chemical from a single facility in a single condition of use.

That is not a realistic assumption, and it is not consistent with the best available science because it ignores reliable information compiled by EPA. As reflected in the Toxics Release Inventory ("TRI") data used in the Fenceline Assessment Approach, polluting facilities are often concentrated in fenceline communities, leaving residents of those communities exposed to the same chemical from multiple sources.[33] In Kent, Washington, for instance, there are major emitters of 1-bromopropane (Protective Metals Inc. and Exotic Metals Forming Company) located approximately two miles apart, both of which release more than 13,000 pounds of the chemical per year.[34] Located between those facilities is a residential neighborhood with an elementary school and a mobile home park.[35] The residents of those homes and the students in that school breathe 1-bromopropane from both of those facilities, yet EPA's Fenceline Assessment Approach evaluates their risks from each facility in isolation.

EPA must consider releases from multiple facilities to better reflect fenceline community exposures. EPA is well equipped to perform this type of assessment using existing modeling tools. EPA has the tools to evaluate combined chemical exposures using existing data and modeling software. Both the Integrated Indoor/Outdoor Air Calculator ("IIOAC") and American Meteorological Society/Environmental Protection Agency Regulatory Model ("AERMOD") software used in the Fenceline Assessment Approach allow EPA to model air exposures from multiple sources simultaneously, including multiple facilities releasing the same chemical. There is no basis for EPA to ignore communities' actual exposures and to separately assess risk from one facility, and one condition of use, at a time. **To more accurately reflect fenceline community exposures, we recommend that EPA immediately revise the Fenceline Assessment Approach and use its existing modeling capacity to measure communities' combined exposures from multiple facilities.**

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[32] EPA, *EPA Scientific Advisory Committee on Chemicals Charge to the Panel – Draft TSCA Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities Version 1.*0, at Question No. 2 (2022), https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0415-0014 (click "Download").

[33] *See, e.g.,* EPA, *Supplement File Environmental Releases to Ambient Air for 1-Bromopropane* (2022), https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0415-0025 (click "Download"; then go to "Environmental Releases" tab) ("1-BP Environmental Releases") (showing 1-bromopropane release data used in Fenceline Assessment Approach case studies).

[34] Map, Earthjustice, *Fenceline Community Exposures in Kent, Washington* (2022) (attached hereto as **Exhibit 1**).

[35] *Id.*

Port Arthur, TX

In 2020,
2.3 million lbs
chemicals released by facilities in Port Arthur, TX

The city of Port Arthur, Texas is bordered on one side by the largest oil refinery in North America: a 3,600-acre plant owned by Motiva Enterprises, which produces 607,000 barrels of oil per day. Adjacent to the Motiva plant is a 4,000-acre refinery owned by Valero Energy. Across the road from these refineries lies West Port Arthur, a predominantly Black community. Within less than a one-mile radius of these and other industrial facilities are elementary and middle schools, churches, parks, and residences—many of which are public housing units. In Jefferson County, where Port Arthur is located, cancer rates for Black residents are approximately 15% higher than the state average, and the cancer death rate is 40% higher.

Port Arthur residents face health risks due to being exposed to the same chemical through multiple facilities and being exposed to different chemicals that contribute towards common adverse health effects. For example, in 2020, five facilities reported to the TRI releases of 1,3-butadiene to the air that totaled 29,404 pounds. Moreover, those and other facilities released at least 579,000 pounds of chemicals that, according to EPA, cause some of the same health effects as 1,3-butadiene. EPA's facility-by-facility, chemical-by-chemical assessment of the risks facing fenceline communities understates the risks to residents of Port Arthur, and to other communities impacted by multiple polluting facilities.

See Map, Earthjustice, *Fenceline Community Exposures in Port Arthur, Texas* (2022) (attached hereto as **Exhibit 2**).

Sources: Community In-Power and Development Association, TRI Data, Earthjustice (Photo Source)

ii. EPA does not consider risks from communities' cumulative exposures to multiple chemicals.

The Fenceline Assessment Approach also fails to consider communities' cumulative exposures to multiple chemicals from a variety of sources and pathways. In doing so, EPA is ignoring the real-world exposures and risks faced by many fenceline communities**.** EPA's failure to consider cumulative exposures is particularly problematic for chemicals that contribute towards common adverse health outcomes, which could increase the likelihood of harm to exposed communities.[36] For example, tetrachloroethylene ("PCE") and trichloroethylene ("TCE") are associated with similar adverse health effects, including cancers of the kidney, liver, cervix, and lymphatic system,[37] and co-exposure to these chemicals could increase the likelihood of these cancers in fenceline communities.

For EPA to assess fenceline communities' risks without taking into account their cumulative exposures is not "consistent with the best available science,"[38] in violation of TSCA. The National Research Council, an advisory body made up of scientific experts, has not only recommended the consideration of cumulative exposures in risk evaluations, but has also warned that "risk assessment might become irrelevant in many decision contexts" without it.[39] TSCA requires EPA to use scientifically supported approaches and methodologies to "integrate and assess available information on hazards and exposures"—including those that contribute to cumulative risks in fenceline communities.[40] This information includes a recent study that outlined methods for identifying cumulative exposures to chemicals that contribute to similar adverse health effects in highly exposed and susceptible groups.[41] **In the current version of the Fenceline Assessment Approach, EPA should apply uncertainty factors to account for any cumulative risks that were not measured in EPA's prior risk evaluations. For future risk evaluations, EPA should revise the Fenceline Assessment Approach to identify fenceline communities that are exposed to multiple chemicals that contribute to similar adverse health effects and calculate the risks associated with those communities' cumulative chemical exposures.**

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[36] Nat'l Rsch. Council, *Phthalates and Cumulative Risk Assessment: The Tasks Ahead* 4–11 (2008), https://www.nap.edu/catalog/12528/phthalates-and-cumulative-risk-assessment-the-tasks-ahead ("NRC Report on Cumulative Risk"); Gina M. Solomon et al., *Cumulative Environmental Impacts: Science and Policy to Protect Communities*, 37 Ann. Rev. Pub. Health 83, 87–88 (2016), https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-032315-021807; UCSF Program on Reproductive Health & the Env't, *Using the Best Available Science to Assess Hazards and Risks of Industrial Chemicals Will Ensure Better Public Health Decisions* 3, https://prhe.ucsf.edu/sites/g/files/tkssra341/f/wysiwyg/UCSF%20PRHE%20EPA%20Chemical%20Policy%20v1.pdf; Kristi Pullen Fedinick et al., *A Cumulative Framework for Identifying Overburdened Populations under the Toxic Substances Control Act: Formaldehyde Case Study*, 18 Int'l J. Env't Rsch. & Pub. Health 6002 (2021), https://doi.org/10.3390/ijerph18116002.

[37] EPA, *Trichloroethylene* (2000), https://www.epa.gov/sites/default/files/2016-09/documents/trichloroethylene.pdf; EPA, *Tetrachloroethylene (Perchloroethylene)* (2000), https://www.epa.gov/sites/default/files/2016-09/documents/tetrachloroethylene.pdf.

[38] 15 U.S.C. § 2625(h).

[39] Nat'l Rsch. Council, *Science and Decisions: Advancing Risk Assessment* 213 (2009), https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment ("NRC Report on Science & Risk Assessment"); NRC Report on Cumulative Risk, *supra* note 36.

[40] 15 U.S.C. § 2605(b)(4)(F)(i).

[41] Kristi Pullen Fedinick et al., *A Cumulative Framework for Identifying Overburdened Populations under the Toxic Substances Control Act: Formaldehyde Case Study*, 18 Int'l J. Env't Rsch. & Pub. Health 6002 (2021), https://doi.org/10.3390/ijerph18116002.

Geismar, LA

In 2020, **11.8 million lbs** chemicals released by facilities in Geismar, LA

The town of Geismar is situated in the middle of "Cancer Alley"—an area with dangerous levels of air pollution from more than 100 petrochemical plants and other industrial facilities. Less than a mile away from residences, churches, and parks in the community of Geismar is an industrial manufacturing complex composed of multiple polluting facilities operated by Shell, Rubicon, BASF, Occidental, Westlake Vinyls, and others.

In 2020, these facilities collectively emitted more than four million pounds of chemicals to the air and released 1.7 million pounds of chemicals into surrounding bodies of water, including the Missippi River. Many Louisiana communities draw drinking water from that river, and local treatment systems are ill equipped to treat or remove toxic chemicals, increasing fenceline community exposures. These releases encompassed more than 100 unique chemicals, 24 of which are associated with cancer, according to EPA's Integrated Risk Information System ("IRIS").

Among the 24 emitted carcinogens are several of the chemicals for which the Fenceline Assessment Approach will be conducted, including carbon tetrachloride, methylene chloride, PCE, and TCE. Combined emissions of these four chemicals amounted to over 80,000 pounds, and three of these chemicals were released from more than one facility in Geismar. The list of emitted carcinogens in Geismar also includes formaldehyde, 1,3-butadiene, 1,1,2-trichloroethane, and 1,2-dichloroethane—chemicals that are currently undergoing risk evaluation under TSCA. Combined emissions of these chemicals amounted to nearly 100,000 pounds.

EPA's Fenceline Assessment Approach does not account for the fact that residents of Geismar are exposed to the same chemical from multiple sources, as well as multiple chemicals from multiple sources that contribute towards common health effects. This concentration of polluters places the community of Geismar at an even higher risk of adverse health outcomes resulting from aggregate and cumulative environmental exposures, making it all the more important to ensure these exposures are accounted for when determining risks.

See Map, Earthjustice, *Fenceline Community Exposures in Geismar and Surrounding Areas, Ascension Parish, LA* (2022) (attached hereto as **Exhibit 3**).

Sources: Louisiana Environmental Action Network, TRI Data, Northwest Arkansas Democratic Gazette (Photo Source)

iii. EPA does not consider fenceline communities' increased susceptibility to harm.

People living in fenceline communities are more likely to experience adverse health effects from chemical exposures than the general population due to a variety of factors that make them more susceptible to harm.[42] These factors can include biological traits like age, genetic makeup, and pre-existing health conditions, which are collectively considered *intrinsic* factors. For example, studies examining air pollution exposure found that underlying diabetes increased the risk of cardiovascular disease from exposure to particulate matter.[43] Susceptibility to harm from chemical exposures can also be increased by external stressors, which include psychosocial stress from experiencing income inequality, violence, racism, healthcare inequity, or food insecurity.[44] In general, people of color in the United States experience disproportionately high levels of these external stressors, collectively known as *extrinsic* susceptibility factors, and as a result, people of color are more susceptible to negative health outcomes from chemical exposures.[45]

While any individual internal or external factor can enhance susceptibility, people living in fenceline communities often experience multiple intrinsic and extrinsic factors simultaneously, which increases the potential for even greater susceptibility to adverse effects from chemical exposures.[46] A study examining nine fenceline communities across the United Sates found that people living within three miles of a polluting facility were more likely to be low-income people of color with reduced access to quality healthcare and healthy foods. In addition, the risk of developing cancer or respiratory illness from air pollution exceeded national averages in all but one of these communities.[47]

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[42] Cliona M. McHale et al., *Assessing Health Risks from Multiple Environmental Stressors: Moving from G×E to I×E*, 775 Mutational Rsch. 11 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5863617/.

[43] Antonella Zanobetti & Joel Schwartz, *Are Diabetics More Susceptible to the Health Effects of Airborne Particles?*, 164 Am. J. Respiratory Critical Care Med. 831 (2001), https://pubmed.ncbi.nlm.nih.gov/11549541/; Antonella Zanobetti et al., *Are There Sensitive Subgroups for the Effects of Airborne Particles?*, 108 Env't Health Persps. 841 (2000), https://pubmed.ncbi.nlm.nih.gov/11017888/.

[44] Rachel Morello-Frosch et al., *Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy*, 30 Health Affs. 879 (2011), https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2011.0153; Cliona M. McHale et al., *Assessing Health Risks from Multiple Environmental Stressors: Moving from G×E to I×E*, 775 Mutational Rsch. 11 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5863617/; Devon C. Payne-Sturges et al*., Methods for Evaluating the Combined Effects of Chemical and Nonchemical Exposures for Cumulative Environmental Health Risk Assessment*, 15 Int'l. J. Env't Rsch. & Pub. Health 2797 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6313653/; Gilbert C. Gee et al., *Environmental Health Disparities: A Framework Integrating Psychosocial and Environmental Concepts*, 112 Env't Health Persps. 1645 (2004), https://doi.org/10.1289/ehp.7074; Gina M. Solomon et al., *Cumulative Environmental Impacts: Science and Policy to Protect Communities* 37 Ann. Rev. Pub. Health 83, 87–88 (2016), https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-032315-021807; Patricia D. Koman et al., *Population Susceptibility: A Vital Consideration in Chemical Risk Evaluation Under the Lautenberg Toxic Substances Control Act*, 17 PLoS Biology 1, 4 (2019), https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000372.

[45] Gilbert C. Gee et al., *Environmental Health Disparities: A Framework Integrating Psychosocial and Environmental Concepts*, 112 Env't Health Persps. 1645 (2004), https://doi.org/10.1289/ehp.7074; Devon C. Payne-Sturges et al*., Methods for Evaluating the Combined Effects of Chemical and Nonchemical Exposures for Cumulative Environmental Health Risk Assessment*, 15 Int'l. J. Env't Rsch. & Pub. Health 2797 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6313653/.

[46] Ronald White et al., Env't Just. Health All. for Chem. Pol'y Reform et al., *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities* (2018), https://ej4all.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf.

[47] *Id.*

In its Fenceline Assessment Approach, EPA does not consider increased susceptibility when assessing risks to fenceline communities. EPA thus fails to use risk assessment methodologies that are "consistent with the best available science,"[48] and understates the risks posed to fenceline communities. It is well established in the scientific literature that both intrinsic and extrinsic factors can increase susceptibility and thus must be taken into consideration when evaluating risks to "potentially exposed or susceptible subpopulations,"[49] including fenceline communities. Further, the National Academy of Sciences has warned that failing to account for both intrinsic and extrinsic susceptibility factors could lead to a vast underestimation of risks from chemical exposures in the human population.[50] **To comply with TSCA, EPA must consider not only fenceline communities' increased exposures but also their heightened susceptibility to chemicals undergoing evaluation as a result of intrinsic and extrinsic susceptibility factors. In the near term, we urge EPA to apply uncertainty factors to account for the unquantified increase in fenceline communities' susceptibility to chemical exposures.**

[48] 15 U.S.C. § 2625(h).

[49] NRC Report on Science & Risk Assessment, *supra* note 39, at 110–11; Rachel Morello-Frosch et al., *Understanding the Cumulative Impacts of Inequalities in Environmental Health: Implications for Policy*, 30 Health Affs. 879 (2011), https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2011.0153; Cliona M. McHale et al., *Assessing Health Risks from Multiple Environmental Stressors: Moving from G×E to I×E*, 775 Mutational Rsch. 11 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5863617/; Devon C. Payne-Sturges et al., *Methods for Evaluating the Combined Effects of Chemical and Nonchemical Exposures for Cumulative Environmental Health Risk Assessment*, 15 Int'l J. Env't Rsch. & Pub. Health 2797 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6313653/.

[50] NRC Report on Science and Risk Assessment, *supra* note 39, at 9–10 ("There is a need for . . . assessments that include combined risks posed by aggregate exposure to multiple agents or stressors . . . ."); *id.* at 10 (calling on EPA to "incorporate interactions between chemical and nonchemical stressors in [risk] assessments").

Houston, TX

In 2020,
9.7 million lbs
of chemicals emitted
by facilities near
Houston, TX

The communities in East Houston, TX neighbor polluting oil refineries, recycling plants, and chemical manufacturing facilities. Collectively, facilities in the surrounding area emitted over 9.5 million pounds of chemicals into the air in 2020, including carcinogenic chemicals—like benzene, ethylene oxide, and 1,3-butadiene—that are linked to leukemia and other lymphatic cancers. Exposure to these chemicals poses a greater risk to the residents of East Houston due to multiple interacting factors that make them more susceptible to harm. These factors include both intrinsic biological factors, like underlying disease, and external stressors, like income inequality and healthcare inequity.

Due to inequitable siting practices and other forms of environmental racism, polluting facilities in East Houston are located primarily in communities of color and areas of economic insecurity. In two of the fenceline neighborhoods in this area, more than 85 percent of the residents are people of color. The median level of family income across all East Houston fenceline neighborhoods is more than 30 percent lower than for the City of Houston, and over a quarter of the residents fall below the poverty level. Approximately 98 percent of the residents of Manchester, an East Houston fenceline community that neighbors 19 polluting industrial facilities, are people of color, and most residents experience food insecurity and healthcare inequity. People in these communities also report higher incidence of heart attacks, indicating underlying cardiovascular disease, compared to the City of Houston and the surrounding Harris County. In addition to heightened susceptibility, residents of these communities are further subjected to high levels of exposure to multiple toxic chemicals, including many chemicals that cause cancer. To accurately measure the real-world risks facing these communities, EPA must consider their increased susceptibility to harm in addition to high levels of cumulative and aggregate exposures.

Sources: TRI Data, Union of Concerned Scientists (Photo Source)

iv. EPA does not consider all relevant exposure pathways.

The scope of the Fenceline Assessment Approach is unduly narrow and fails to consider the relevant routes and pathways through which fenceline communities are exposed to chemicals. EPA acknowledges that its Fenceline Assessment Approach is "limited to certain air and water pathways" and "does not include proposed methodology for other pathways previously not assessed (*e.g.*, disposal, land use, groundwater-derived drinking water sources like wells, fish consumption) in published risk evaluations."[51] But EPA plans to use this narrow approach to evaluate risks from chemicals like TCE and PCE that are pervasive in soil and groundwater and that can migrate from groundwater and soil vapor into overlying buildings. EPA does not explain how it plans to assess community risks from those excluded exposure pathways, including, but not limited to, ingestion of groundwater-based drinking water supplies, ingestion and dermal absorption of soil, and inhalation of air contaminated via soil vapor intrusion.

EPA's failure to consider all exposure pathways also understates risks to tribal communities. This deficiency was described in greater detail in the National Tribal Toxics Council's ("NTTC's") comments to the TSCA Science Advisory Committee on Chemicals, and we urge EPA to address them in its revisions to the Fenceline Assessment Approach.[52] As noted by the NTTC, tribal communities often face increased chemical exposures from their diets, cultural practices, drinking water supplies, and proximity to waste disposal sites, in addition to the air and surface water.[53] EPA's narrow focus on air and certain water pathways understates the actual risks that tribal communities face.

EPA also fails to account for all exposures from a chemical's air and surface water releases. For instance, when evaluating air releases, EPA considers inhalation of the chemical but not potential deposition of the chemical from the air into surface water or soil, which can result in additional fenceline community exposures via drinking water or soil vapor intrusion. This omission is of particular concern for fenceline communities located alongside rivers or other surface water bodies, who are often exposed to the same chemical in their air and surface water. EPA can use existing information and models to address these exposures, since the IIOAC model used in the Fenceline Assessment Approproach enables the examination of the deposition of particle pollutants from the air into soil and water.[54]

Especially given its legal duty to take into consideration "reasonably available" exposure information using the "best available science," including available methods and models,[55] EPA cannot categorically exclude exposure routes and pathways, especially those that EPA can readily examine using existing modeling tools. The IIOAC and AERMOD software used in the Fenceline Assessment Approach allow EPA to examine air exposures resulting from a variety of emission sources that EPA did not previously consider, including emissions from incineration (including high

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[51] Fenceline Assessment Approach, *supra* note 1, at 10.
[52] *See* Nat'l Tribal Toxics Council, *Comments on Draft Toxic Substances Control Act (TSCA) Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities*, Docket No. EPA-HQ-OPPT-2021-0415-0044 (Feb. 28, 2022), https://www.regulations.gov/comment/EPA-HQ-OPPT-2021-0415-0044 (click "Download").
[53] *Id.*
[54] *See* EPA, *User's Guide: Integrated Indoor-Outdoor Air Calculator*, at 1, 7–8, 10–12 (2019), https://www.epa.gov/sites/default/files/2019-06/documents/iioac_1.0_users_guide_may_2019.pdf.
[55] 15 U.S.C. § 2625(h), (k).

temperature incineration) as well as area water and soil emissions.[56] **EPA should collect available information on all of the ways that fenceline communities are exposed to chemicals, and it should use its existing modeling capacity to measure exposures beyond air and surface water.**

[56] *See* EPA, *User's Guide: Integrated Indoor-Outdoor Air Calculator*, at 1, 5–20 (2019), https://www.epa.gov/sites/default/files/2019-06/documents/iioac_1.0_users_guide_may_2019.pdf.

Newark, NJ

In 2020,
28.6 thousand lbs
of chemicals emitted
by facilities in
Newark, NJ

The Ironbound neighborhood of Newark, NJ is a multi-ethnic, working-class neighborhood that houses nearly a fifth of the city's population. A quarter of the residents in the Ironbound live below the poverty line and many children in the neighborhood have asthma and other respiratory conditions. According to the TRI, the Ironbound is one of the most heavily polluted areas in the Northeastern United States. Many houses in the Ironbound, like those pictured above, are situated above a former manufacturing site that used and frequently disposed of TCE, contaminating the soil and groundwater. TCE is a volatile chemical that forms vapors that can migrate from soil and groundwater into overlying buildings. Members of the Ironbound community have been and are still being exposed to TCE in their own homes as a result of vapor intrusion; some residents have been breathing polluted air in their homes for over a decade.

The Fenceline Assessment Approach fails to account for the risks to those residents, since it excludes relevant exposure pathways, including vapor intrusion. EPA's own risk evaluation for TCE found that there is an association between inhalation of air contaminated with TCE and adverse health outcomes such as kidney cancer, liver cancer, and other non-cancer risks, and EPA has warned that vapor intrusion "is a likely significant source" of TCE "in situations where residences are located near soils or groundwater with high contamination levels." Despite this finding, EPA's current methodology excludes communities like the Ironbound that face substantial health risks from vapor intrusion, contaminated groundwater, and other excluded exposure pathways.

Sources: Ironbound Community Corporation, New Jersey Dep't of Env't Protection, TRI Data, Environmental Justice in the Ironbound (Info and Photo Source)

v. EPA does not consider risks from known and foreseen exposure combinations.

The Fenceline Assessment Approach separately calculates risks from a chemical's releases to air and surface water, but it does not combine exposure pathways or consider the risks to communities that both breathe polluted air and drink contaminated water.[57] In addition, EPA considers fenceline community risks *only* from exposure to a chemical from either outdoor air or surface water, even though many community residents may also be exposed to the same chemical in their workplaces and their homes.[58] Given that real-world exposures often occur across multiple exposure routes and pathways simultaneously, EPA must evaluate those known and reasonably foreseen combinations of exposures in the Fenceline Assessment Approach.[59]

EPA also fails to account for background exposures to chemicals that are present in fenceline communities but cannot be attributed to a specific, TSCA-regulated source. Such background exposures must be considered, as they contribute to the overall body burden of fenceline community residents and can render those residents more susceptible to harm from TSCA-regulated releases. This is a particular concern for risk evaluation chemicals like carbon tetrachloride, which are "ubiquitous in ambient air,"[60] as well as for chemicals, like phthalates, which are widely found in personal care products, food packaging, and other products that are not directly regulated under TSCA.[61] The National Academy of Sciences has emphasized the "[n]eed for [e]valuation of [b]ackground [e]xposures" when conducting chemical risk evaluations, explaining that even low dose exposures "may have a relevant biologic effect" when combined with elevated background levels.[62] **The Fenceline Assessment Approach should consider all of the ways that residents of fenceline communities are exposed to toxic chemicals by incorporating EPA's existing analyses of occupational and consumer chemical exposures and available information about background exposure levels.**

vi. EPA does not consider chemical accidents, spills, and other peak release events.

In the Fenceline Assessment Approach, EPA does not consider the impacts of chemical accidents, spills, or releases that can result in acute risks to fenceline communities. These events are "known" and "reasonably foreseen" consequences of chemical manufacturing, transportation, use, and disposal, and therefore, they must be considered under TSCA.[63] At facilities subject to EPA's Risk Management Plan Rule,[64] which covers only a small fraction of the facilities that are subject to TSCA, there were more than 1,175 harmful chemical incidents between 2011 and 2020—an

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[57] Fenceline Assessment Approach, *supra* note 1, at 12–15.
[58] While EPA evaluated risks from many occupational and consumer product exposure scenarios in its original risk evaluations, it fails to explain whether or how it plans to combine those analyses with its new fenceline community assessments to determine the total risks faced by fenceline community members. *See id.* at 10–11.
[59] 15 U.S.C. §§ 2602(4), 2605(a).
[60] Agency for Toxic Substances and Disease Registry, CDC, *Toxicological Profile for Carbon Tetrachloride*, at 187 (2005), https://www.atsdr.cdc.gov/toxprofiles/tp30.pdf.
[61] NRC Report on Cumulative Risk, *supra* note 36, at 3; Ted Schettler, *Human Exposure to Phthalates Via Consumer Products*, 29 Int'l J. Andrology 134 (2006), https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2605.2005.00567.x; *see also* 15 U.SC. § 2602(2)(B) (excluding various items regulated under other statutes including "food, food additive[s], drug[s], [and] cosmetic[s]" from the definition of "chemical substance[s]" regulated under TSCA).
[62] NRC Report on Science and Risk Assessment, *supra* note 39, at 130, 132.
[63] 15 U.S.C. § 2602(4).
[64] 40 C.F.R. §§ 68.1–68.220.

average of 117 per year.[65] Many of these incidents involved large releases of TSCA risk evaluation chemicals, such as a 2019 explosion at a Port Neches chemical manufacturing facility that released as much as 30,000 pounds of 1,3-butadiene (as well as untold amounts of asbestos) into the surrounding community.[66]

EPA also fails to account for the peak exposures that fenceline communities experience during facility start-up, shutdown, and malfunction conditions. As this administration has acknowledged, "[start-up, shutdown, and malfunction] events have the potential to lead to higher emissions and endanger public health."[67] Yet EPA's modeling effectively erases facilities' peak chemical releases by using a "continuous exposure scenario" that averages a facility's annual emissions over its entire period of operations.[68] For instance, "if a facility has a total annual release of 10,000 lb/year, then the daily release from a facility operating 365 days/year, 7 days per week, and 24 hours per day would be 27.4 lb per day for every day of the year over a 24-hour period."[69] But that is not how facilities operate, and EPA's failure to consider periods of heighted emissions—whether due to an accident, a storm, or any other cause—understates the acute risks that communities face as a result of exposures to high levels of a chemicals over a short period of time. There is existing data on peak emissions releases available from chemical incident reports, stack and facility monitoring records, and other sources that are "reasonably available" to EPA. EPA should also consider the off-site consequences analyses in facilities' Risk Management Plans to estimate the impacts of foreseen but unintended releases.[70] **The Fenceline Assessment Approach should consider that data and evaluate the acute risks associated with peak exposure levels, including exposures from spills, accidents, and other unintended releases.**

[65] Cmty. In-Power & Dev. Ass'n et al., *Comments on Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act*, Docket No. EPA-HQ-OLEM-2021-0312-0170, at 13 (July 29, 2021), https://www.regulations.gov/comment/EPA-HQ-OLEM-2021-0312-0170 (click "Download").
[66] U.S. Chem. Safety & Hazard Investigation Bd., *Fire and Explosions at TPC Group Port Neches Operations Facility* (2020), https://www.csb.gov/assets/1/17/tpc_factual_update_10-29-2020.pdf?16614; Melissa Alonso & Jason Hanna, *Evacuation Order Lifted After Texas Chemical Plant Explosions, but Officials Warn About Asbestos Debris*, CNN (Nov. 29, 2019), https://www.cnn.com/2019/11/29/us/texas-plant-explosions-friday/index.html.
[67] Memorandum from Janet McGabe, Deputy Adm'r, EPA, to Reg'l Adm'rs, EPA 2 (Sept. 30, 2021), https://www.epa.gov/system/files/documents/2021-09/oar-21-000-6324.pdf (withdrawing Oct. 9, 2020, memorandum addressing startup, shutdown, and malfunctions in state implementation plans).
[68] *E.g.,* Fenceline Assessment Approach, *supra* note 1*,* at 90.
[69] *Id.* at 30.
[70] *See* EPA, Rep. No. EPA 550-B-99-009, *Risk Management Program Guidance for Offsite Consequence Analysis* (2009), https://19january2017snapshot.epa.gov/sites/production/files/2013-11/documents/oca-chps.pdf.

Louisville, KY

In 2020,
2.7 million lbs
chemicals released
by facilities in
Louisville, KY

Rubbertown is a cluster of industrial plants located along the Ohio River in Louisville, Kentucky, named after the facilities built during World War II to produce tires and other rubber products. There are over 11 chemical facilities, several other commercial and industrial operations, and a municipal wastewater facility that releases various chemicals, materials, and waste products into the environment. The population of the residential neighborhood adjacent to Rubbertown is predominantly Black, and EPA has characterized the neighborhood as an environmental justice community. EPA's National Air Toxics Assessment has shown that residents near Rubbertown have a higher risk of cancer and other health problems than people in other neighborhoods with lower concentrations of industrial facilities.

EPA's Fenceline Assessment Approach fails to account for serious risks faced by residents near Rubbertown. EPA does not consider the combined emissions from the multiple facilities in the area, all of the ways that residents near Rubbertown are exposed to hazardous chemicals, and residents' acute exposures from the leaks, spills, explosions, and other unplanned releases that plague the community. In November 2018, a Zeon Chemicals facility released 701 pounds of 1,3-butadiene—a carcinogen that EPA is currently evaluating under TSCA—over an eight-hour period due to an improper valve position. As reflected in the accompanying timeline (attached hereto as **Exhibit 4**), that same facility has a history of unplanned releases of 1,3-butadiene. However, the Fenceline Assessment Approach assumes that all releases will occur at a continuous rate over the course of the entire year, and thus fails to consider the community's risks associated with the emissions peaks from unplanned releases that are common at Zeon and other industrial facilities.

Sources: Rubbertown Emergency ACTion (REACT), TRI Data, Rubbertown Air Toxics Risk Assessment, EPA Science Matters, Louisville Metro Air Pollution Control District, Louisville Excess Emission Event Reports for Dec 2021 and Jan 2022, WFPL News (Photo Source)

vii. EPA does not consider complete or reliable chemical release data, and it fails to account for gaps and discrepancies in the data that it does consider.

To estimate chemical releases in the Fenceline Assessment Approach, EPA relies first and foremost on facilities' 2019 reporting to the TRI. If EPA identifies 2019 TRI reporting for a chemical's condition of use, even from a small number of facilities, it uses that data to estimate community exposures from that use.[71] This approach is flawed for several reasons.

First, as EPA acknowledges, TRI reporting data is incomplete and does not cover all facilities that release a chemical or all releases from covered facilities.[72] Second, facilities are "not required to monitor or measure the quantities, concentration, or frequency of any toxic chemical release for TRI reporting," but may instead report self-estimated releases that are not verified by EPA or any other governmental authority.[73] Third, the amount of chemical releases that a facility reports to the TRI can fluctuate wildly from year to year, such that relying on a single year's reporting is not a reliable measure of "known" or "reasonably foreseen" releases.[74] Fourth, under the TRI, companies are free to go back and retroactively reduce their prior years' reporting for TSCA risk evaluation chemicals, as companies have previously done for other chemicals that attracted regulatory attention, such as ethylene oxide.[75] For all of these reasons, among others, a single year of TRI reporting is not a reliable foundation for EPA's Fenceline Assessment Approach.

TSCA requires EPA to consider all "reasonably available" information when conducting risk evaluations,[76] a term defined in EPA's implementing regulations as "information that EPA possesses or can reasonably generate, obtain, and synthesize."[77] Additional release and exposure information is "reasonably available" to EPA, and must be considered in EPA's assessment of fenceline community risks. **To begin, EPA should review at least the last five years of TRI data and the highest reported release amount to estimate a facility's "known" and "reasonably foreseen" releases. EPA should then supplement that TRI data with other available data sources, including facility and fenceline monitoring data. Because EPA has the authority to require the collection of exposure data under TSCA,[78] future versions of the Fenceline Assessment Methodology should require facilities that release risk evaluation chemicals to conduct community monitoring and should consult with impacted communities about appropriate monitoring locations and protocols.**

In addition to the data sources that EPA failed to consider, there are a number of troubling gaps and discrepancies in the data that EPA used in its "case studies" of 1-bromopropane ("1-BP") and methylene chloride's risks to fenceline communities. While EPA claims that those case studies were based on 2019 TRI reporting, EPA has omitted major sources of both chemicals that reported to the TRI in 2019, including:

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[71] Fenceline Assessment Approach, *supra* note 1, at 12, 21.
[72] *Id.* at 54–55.
[73] *Id.* at 55.
[74] *See* 15 U.S.C. § 2602(4).
[75] Sharon Lerner, *Tracking the Invisible Killer*, Intercept (Mar. 18, 2021), https://theintercept.com/2021/03/18/epa-pollution-cancer-ethylene-oxide/.
[76] 15 U.S.C. § 2625(k).
[77] 40 C.F.R. § 702.33.
[78] 15 U.S.C. § 2603(a).

- Molex LLC in Lincoln, NE, the fourth largest source of 1-BP releases to air, per 2019 TRI data
- Greenville Tube Co. in Clarksville, AR, the fifth largest source of 1-BP releases to air, per 2019 TRI data
- Protective Coatings Inc. in Kent, WA, the 15th largest source of 1-BP releases to air, per 2019 TRI data
- Leisure Pools in Knoxville, TN, the 11th largest methylene chloride source of methylene chloride releases to air, per 2019 TRI data.[79]

EPA does not explain why case studies that were purportedly based on 2019 TRI data omitted three of the top 15 1-BP sources in the 2019 data set, as well as a major emitter of methylene chloride. All of the foregoing facilities fall within conditions of use that are covered by TSCA, and their omission affects EPA's estimates of chemical releases from those conditions of use. **EPA must investigate the reasons for these discrepancies, recheck all of its case studies to identify any other missing facilities that should have been listed, and institute controls to ensure that these problems do not recur when the Fenceline Assessment Approach is applied in the future**.

[79] *Compare* EPA, *TRI Explorer*, https://enviro.epa.gov/triexplorer/tri_release.chemical (choose "2019" for "Year of Data"; then choose "Select specific chemical(s)" for "Chemical"; then select"1-bromopropane" and "dichloromethane"; then click "Generate Report") (last visited Mar. 16, 2022) (2019 TRI release data), *with* 1-BP Environmental Releases, *supra* note 33, *and* EPA, *Supplemental File Environmental Releases to Ambient Air for Methylene Chloride* (2022), https://www.regulations.gov/document/EPA-HQ-OPPT-2021-0415-0026 (click "Download"; then go to "Environmental Releases" tab) (showing methylene chloride release data used in Fenceline Assessment Approach case studies).

St. Charles Parish, LA

In 2020,
21.9 million lbs
chemicals released by facilities in St. Charles Parish, LA

St. Charles Parish in Louisiana is situated in the middle of Louisiana's chemical corridor—Cancer Alley. The cancer risk in St. Charles Parish is three times greater than the national average, and 64% of this risk in St. Charles comes from ethylene oxide—a colorless and odorless chemical that is known to be carcinogenic at even low levels of exposure. In recent years, EPA has acknowledged that ethylene oxide can cause cancer at levels previously thought to be safe. A facility owned by Union Carbide located in St. Charles is the largest emitter of ethylene oxide in Louisiana.

The Union Carbide facility was one facility out of many ethylene oxide emitters across the nation that retroactively and drastically reduced the amount of releases they had initially reported to the TRI for past years. In 2016, the Union Carbide facility reported 35,858 pounds of ethylene oxide releases, but in 2019, this number reported for 2016 had been reduced to 13,883. Changes like these to the TRI by industry render communities extremely uncertain about the true level of ethylene oxide being released in their neighborhoods. In general, TRI numbers are estimates that are rarely based on actual measurements and are not verified by governmental bodies; despite the significance these numbers hold for community members that are facing health risks from pollution, the TRI reporting process is largely dependent on the good faith of the regulated facilities. This event highlights the unreliable nature of TRI reporting and showcases the need to look at all available alternative data sources—such as fenceline monitoring conducted by state environmental departments and/or required under permits—when assessing releases to communities.

Sources: Louisiana Environmental Action Network, The Intercept, TRI Data, KTBS News (Photo Source)

viii. EPA relies on the Trump Administration's flawed chemical toxicity values.

In the three "case studies" presented in the Fenceline Assessment Approach, EPA calculates risks to fenceline communities by using chemical toxicity values taken from the Trump Administration's first ten TSCA risk evaluations.[80] However—as EPA and the TSCA Science Advisory Committee on Chemicals have recognized—the Trump Administration's toxicity values were "compromised" by "political interference,"[81] understated chemicals' risks,[82] and suffered from other "major problem[s]."[83] For instance, the Fenceline Assessment Approach calculated fenceline community risks from methylene chloride based on a cancer risk value that is seven times weaker than the value previously used by EPA scientists and 30 times weaker than the value calculated by the Occupational Safety and Health Administration.[84] The TSCA Science Advisory Committee on Chemicals noted this discrepancy and called on EPA to "explain why new [cancer risk values] were derived and describe exactly how they differ from previous assessments."[85] EPA never did so.

New assessments that are based on the prior administration's flawed toxicity information will understate risks to fenceline communities, increasing the likelihood that EPA fails to identify or address the unreasonable risks facing those communities. **EPA should thus ensure that any application of the Fenceline Assessment Approach is based on scientifically supported and health-protective toxicity values, particularly where such values are readily available from EPA's IRIS program, California EPA's Office of Environmental Health Hazard Assessment, and other sources (such as for methylene chloride and TCE).**

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[80] Fenceline Assessment Approach, *supra* note 1, at 62–63, 90, 141–42.
[81] Email from Michal Feedhoff, Acting Assistant Adm'r, EPA, to EPA Staff (Mar. 10, 2021), *reprinted in* EPA, Rep. No. 21-E-0146, *EPA Deviated from Typical Procedures in Its 2018 Dicamba Pesticide Registration Decision* app. a, at 22 (2021), https://www.epa.gov/sites/default/files/2021-05/documents/_epaoig20210524-21-e-0146.pdf.
[82] TSCA Sci. Advisory Comm. on Chems., EPA, Rep. No. 2019-02, *Peer Review for EPA Draft Risk Evaluations for 1,4-Dioxane and Cyclic Aliphatic Bromide Cluster (HBCD)* 87 (2019), https://www.regulations.gov/document/EPA-HQ-OPPT-2019-0238-0063 (click "Download").
[83] TSCA Sci. Advisory Comm. on Chems., EPA, Rep. No. 2020-03, *Peer Review for the United States Environmental Protection Agency (EPA) Draft Risk Evaluation for Carbon Tetrachloride* 54 (2020), https://www.regulations.gov/document/EPA-HQ-OPPT-2019-0499-0046 (click "Download").
[84] *See* Fenceline Assessment Approach, *supra* note 1, at 91; Declaration of Adam Finkel, Sc.D., CIH ¶¶ 6–10, *Neighbors for Env't Just. v. EPA*, No. 20-72091 (9th Cir. Jan. 25, 2021), ECF No. 41-3.
[85] TSCA Sci. Advisory Comm. on Chems., EPA, Rep. No. 2020-01, *Peer Review for EPA Draft Risk Evaluation for Methylene Chloride* 59 (2019), https://www.regulations.gov/document/EPA-HQ-OPPT-2019-0437-0080 (click "Download").

Chicago, IL

In 2020, 961.8 thousand lbs chemicals released by facilities in Chicago, IL

The abundance of industrial polluters on the South and Southwest Side of Chicago—which are composed of predominantly Black and Latino communities—has resulted in disproportionately high levels of air pollution that causes harm to surrounding communities. Those polluters include a hazardous waste recycling facility located near McKinley Park, a neighborhood on the Southwest side of Chicago. This facility is less than a mile away from residential houses, businesses, schools and daycare centers, and frequented roads. According to the TRI, this facility has released more than 113,000 pounds of methylene chloride—a chemical associated with cancer and other serious harms—into the air between 2014 and 2020. These emissions are especially concerning given that cancer death rates on the South Side of Chicago are twice the nation's average. Residents of McKinley Park are unable to enjoy their time freely outdoors, such as taking walks or playing sports, and often limit the time they and their families spend outside because of their concerns.

EPA's Fenceline Assessment Approach understates the risks to residents of McKinley Park, and to other communities impacted by releases of methylene chloride, because it relies on the Trump administration's flawed assessment of methylene chloride's cancer risks. In particular, the Fenceline Assessment Approach uses a cancer risk value for methylene chloride that is nearly 30 times weaker than the value determined by the Occupational Safety and Health Administration and approximately seven times weaker than the value previously used by EPA, without explaining the basis for that difference. Due to that unsupported cancer risk value and the other flaws described above, EPA concluded that the emission of methylene chloride from chemical recycling facilities did not pose unreasonable risk to fenceline communities, increasing the likelihood that communities like McKinley Park will be left exposed to unsafe levels of methylene chloride.

Sources: Neighbors for Environmental Justice, TRI Data, Chicago Tribune (Photo Source)

E. Once EPA Has Conducted a Fenceline Assessment, It Must Issue Chemical Regulations That Eliminate Unreasonable Risk to Fenceline Communities.

After EPA completes the fenceline screening for the six identified chemicals as part of risk management, the Fenceline Assessment Approach must be used as part of future risk evaluation processes, rather than solely during risk management, as here. During the risk management phase for any chemical, EPA has a mandatory obligation to take into account the exposures faced by every relevant susceptible subpopulation, such as fenceline communities, and integrate those exposures into its risk determination for each subpopulation.[86] Here, EPA has recognized that it did not do so during the risk evaluation for at least six of the first ten chemicals, and thus it has appropriately (though belatedly) decided to employ a fenceline screening methodology to fill in the data gaps caused by its unlawful conduct.

Going forward however, EPA cannot wait until risk management to first account for the total exposures and risks faced by fenceline communities. Unfortunately, some of the language in the draft Fenceline Assessment Approach suggests that EPA believes that it may do so. In the "Looking Ahead" section, EPA discusses how it will utilize the results of the Fenceline Assessment Approach in the future, but all of the discussion centers around the use of this screening tool in the risk management stage without recognizing that the Fenceline Assessment Approach is a necessary component of all future risk evaluations. In the future, EPA must account for fenceline community exposures through all pathways at the risk evaluation stage.

The "Looking Ahead" section also raises grave concerns as to how EPA will use the results of its Fenceline Assessment Approach, suggesting that EPA is badly misconstruing its TSCA obligations at both risk evaluation and at risk management.

Outcome One: EPA's description of "Outcome One" ignores EPA's obligation to determine whether "any combination" of conditions of use present unreasonable risk and to regulate the "chemical substance" to the extent necessary to eliminate that combined unreasonable risk.[87] EPA thereby seemingly perpetuates the unlawful use-by-use approach that EPA abandoned when it issued revised, whole-chemical risk determinations. In this example, EPA states that "[n]o unreasonable risk was identified for [condition of use 4]" and thus that the Agency will "expeditiously propose[] no restrictions on the chemical being used for [that condition of use] as no unreasonable risk is identified or expected."[88] But looking at a single condition of use in isolation is contrary to what TSCA requires. Even if a condition of use would not result in unreasonable risk on its own, if it is contributing to unreasonable risk in "combination" with the other uses, EPA must at least consider whether to regulate the use.[89] EPA has recognized as much in its draft revised risk determinations, stating that it is not limited to regulating only the uses that "drive[]" unreasonable risk findings.[90] EPA's contrary statements here are inconsistent with its decision to adopt a whole chemical approach.

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[86] 15 U.S.C. § 2605(b)(4)(F).
[87] *Id.* § 2605(a).
[88] Fenceline Assessment Approach, *supra* note 1, at 19.
[89] 15 U.S.C. § 2605(a).
[90] EPA, *Draft Revised Unreasonable Risk Determination for HBCD* 1 (2021), https://www.epa.gov/system/files/documents/2021-12/9823-01_risk-determination.pdf.

Outcome Three: EPA's description of "Outcome Three" seems to ignore EPA's obligation to promulgate risk management rules that ensure that the chemical "no longer presents [unreasonable] risk" to a relevant subpopulation for whom unreasonable risk exists.[91] In the scenario, EPA acknowledges that the Fenceline Assessment Approach identifies unreasonable risk for the fenceline community, "primarily as a result of uncontrolled fugitive emissions," but then suggests that EPA need not issue risk management rules designed to eliminate that risk.[92] Instead, the description suggests that EPA will design the rules to eliminate unreasonable risk to "protect" workers, in compliance with section 6(a), but that EPA only "expect[s]" that the standards may also protect the fenceline community.[93]

Such an approach would be unlawful. EPA is required to protect all subpopulations from unreasonable risk posed by a chemical, and to the extent EPA identifies risk to workers and to fenceline communities, EPA must issue risk management rules that eliminate the unreasonable risk to both. But under EPA's scenario, it hypothesizes that if it sets an exposure limit for workers, then regulated entities may adopt techniques to comply that, in turn, EPA would "expect[]" to protect the fenceline community.[94] But regulated entities then have the option not to do so, instead turning to other means of reducing worker exposures—such as PPE, work practice standards, etc.—that would not result in emissions reductions to protect the community. Of course, EPA is allowed to establish a single set of standards that protect both subpopulations, but EPA must be able to make an affirmative finding, based on the best available science and basic principles of reasoned decisionmaking, that the standards do meet the requirements of section 6(a)—*i.e.*, will actually eliminate unreasonable risk faced by fenceline communities. EPA's proposed hypothetical would not do so and is therefore unlawful.

A similar problem arises under "Outcome Four," where EPA suggests that it might promulgate standards to protect fenceline communities—*e.g.*, "total enclosures or high capture and control efficiency requirements"—and rely on those emissions to protect workers, even though "such standards are not set up to address worker exposures directly."[95] It is not enough that such standards "can reduce . . . worker exposures" to eliminate unreasonable risk,[96] they must, and EPA has the legal obligation to ensure they do.[97]

The hope-and-a-prayer approach embodied in these hypothetical scenarios is not only contrary to the statutory language, but it suggests that EPA continues to disregard the need to center considerations of environmental justice in disregard of the President's directive that EPA do so.

Outcome Four: EPA's discussion of how it might utilize the Clean Air Act to address unreasonable risk findings suggests that EPA may use the risk management process in a manner that leaves fenceline communities and other subpopulations un- or underprotected. EPA's proposal to rely on the Clean Air Act to address fenceline community risks fails to acknowledge the limitations

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[91] 15 U.S.C. § 2605(a).
[92] Fenceline Assessment Approach, *supra* note 1, at 19.
[93] *Id.*
[94] *Id.*
[95] *Id.* at 20.
[96] *Id.*
[97] 15 U.S.C. § 2605(a).

of that law, skates past numerous implementation issues, and suggests that EPA misunderstands key differences between TSCA and other environmental laws.

Section 9(b) of TSCA authorizes EPA to "coordinate" its actions under TSCA, including risk management, with other statutory authorities that EPA administers.[98] Contrary to EPA's description in the Fenceline Assessment Approach, this is not a "referr[al]," an altogether different process authorized under section 9(a).[99] Instead, EPA must employ TSCA unless EPA determines under section 9(b) that the unreasonable risk associated with a chemical "could be eliminated or reduced to a sufficient extent by actions taken" under another environmental statute.[100] "Sufficient" here means that the actions taken under another act accomplish TSCA's mandate to eliminate unreasonable risk. Thus, whether it acts under TSCA or another statute, EPA has the same underlying obligation: to regulate chemicals to the extent necessary to eliminate unreasonable risk.

While there may be circumstances where coordination under section 9(b) makes sense, the hypothetical example raised by EPA highlights a number of problems and drawbacks with utilizing other EPA-administered statutes for risk management. EPA's cursory description and failure to recognize the potential problems are extremely troubling.

First, the legal requirements for standard-setting differ between TSCA and other statutes administered by EPA, raising the prospect that standards issued under another statute will not be sufficient to eliminate unreasonable risk. Taking EPA's example of action under section 112 of the Clean Air Act, there are a number of immediate mismatches between TSCA and the Clean Air Act that are likely to create problems if EPA adopts the proposed approach:[101]

> **Different Protected Populations:** Unlike TSCA, which mandates protection of all relevant subpopulations, including workers, EPA generally does not administer the Clean Air Act to protect workers from indoor air pollution at their job site.[102] Thus, if EPA were to issue standards compliant with section 112(f) of the Clean Air Act, it would be unclear how EPA could ensure that those standards protect workers since EPA generally does not interpret section 112(f) to account for worker risk. Under this hypothetical, elimination of unreasonable risk would happen only by happenstance.
>
> **Different Risk Benchmarks:** Under EPA's Clean Air Act framework, the level of risk that typically triggers regulation is less stringent than that EPA has established under TSCA. Under TSCA, EPA has deemed cancer risk in excess of 1-in-1 million to present

[98] 15 U.S.C. § 2608(b)(1).
[99] Fenceline Assessment Approach, *supra* note 1, at 20.
[100] 15 U.S.C. § 2608(b)(1). Even where EPA determines it can use another statute to address unreasonable risk, EPA has discretion to decline to do so and instead issue risk management rules under TSCA. *Id.*
[101] EPA's discussion indicates that the hypothetical action would be done pursuant to section 112 of the Clean Air Act, which is the primary authorization for regulating the emission of toxic air pollutants from "area sources." *Compare* Fenceline Assessment *supra* note 1, at 20, *with* 42 U.S.C. § 7412.
[102] EPA admits as much. *See* Fenceline Assessment Approach, *supra* note 1, at 20 ("[S]uch standards are not set up to address worker exposures directly . . . .").

unreasonable risk, meaning that TSCA risk management rules must reduce cancer risk below that threshold.[103]

But EPA has not taken as stringent an approach under the Clean Air Act. While EPA recognizes that the statute requires the Agency to conduct rulemaking if cancer risk is above 1-in-1 million, it treats this as "an aspirational goal" to achieve.[104] Instead, in the course of such a rulemaking, "EPA will generally presume that if the risk to [the maximum exposed] individual is no higher than approximately one in 10 thousand [*i.e.*, 100-in-1 million], that risk level is considered acceptable."[105] That presumptive benchmark is 100-times less stringent than what EPA has established under TSCA. Consequently, communities cannot count on EPA's administration of section 112(f) for assuring as much protection as TSCA would provide, because standards that EPA might deem legally sufficient for Clean Air Act purposes, would not be sufficient to ensure that a chemical "no longer presents [unreasonable] risk" under the TSCA framework EPA has adopted.[106]

In addition, there are prominent examples where EPA has refused to issue Clean Air Act rules to bring risk below the 100-in-1 million benchmark and has left communities subject to cancer risk above that extreme level. This is because EPA has sometimes treated this benchmark as more discretionary than binding in its administration of section 112.[107] For example, in a 2005 rulemaking for Coke Oven Batteries, EPA found that the maximum individual cancer risk was 300-in-1 million, but nonetheless found that level of risk to be acceptable.[108] Thus, the final standards EPA adopted for that source category only reduced cancer risk to 270-in-1 million, nearly three times the benchmark.[109] And in a 2020 rulemaking for Miscellaneous Organic Chemical Manufacturing, EPA applied the benchmark to find that the cancer risk due to allowable emissions was 800-in-1 million and thus unacceptable, but it issued rules that still left some community members exposed to a

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[103] *See* Fenceline Assessment Approach, *supra* note 1, at 54.
[104] *Nat. Res. Def. Council v. EPA*, 529 F.3d 1077, 1082 (D.C. Cir. 2008).
[105] EPA, *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology* 3 (Dec. 14, 2017) (first alteration in original) (quoting National Emission Standards for Hazardous Air Pollutants; Benzene Emissions From Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants, 54 Fed. Reg. 38,044, 38,045 (Sept. 14, 1989) (to be codified at 40 C.F.R. pt. 61)), https://www.regulations.gov/document/EPA-HQ-OAR-2005-0155-0560 (click "Download").
[106] 15 U.S.C. § 2605(a).
[107] EPA, *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology* 3–4 (Dec. 14, 2017), https://www.regulations.gov/document/EPA-HQ-OAR-2005-0155-0560 (click "Download") ("Consequently, the presumptive risk level of 100-in-1 million (1-in-10 thousand) provides a benchmark for judging the acceptability of maximum individual lifetime cancer risk, but does not constitute a rigid line for making that determination."); *see also* EPA, Rep. No. 21-P-0129, *EPA Should Conduct New Residual Risk and Technology Reviews for Chloroprene- and Ethylene Oxide-Emitting Source Categories to Protect Human Health* 3 (2021), https://www.epa.gov/sites/default/files/2021-05/documents/_epaoig_20210506-21-p-0129.pdf ("A maximum individual risk level of less than 100 in one million is generally considered acceptable, but the overall determination of risk acceptability is also dependent on other health measures and factors, including the chronic and acute noncancer risks, number of people exposed at various risk levels, and uncertainties.").
[108] National Emission Standards for Coke Oven Batteries, 70 Fed. Reg. 19,992, 19,993–94 (Apr. 15, 2005) (to be codified at 40 C.F.R. pt. 63).
[109] *Id.* at 19,994.

cancer risk of 200-in-1 million.[110] Communities have been calling on EPA to reduce the unacceptability benchmark, because it is outdated and does not protect children or fenceline communities exposed to multiple types of sources simultaneously, but so far EPA has not changed or updated this benchmark.

Discretionary Standard Setting: Moreover, as interpreted by EPA, setting health-based standards for area sources is largely discretionary under the Clean Air Act, and the Agency has largely declined to set risk-based standards for area sources, instead largely opting to impose standards based on generally applicable control technologies.[111] For example, in setting standards for area source dry cleaners, EPA refused to reduce risks that significantly exceed this 1-in-10,000 benchmark. In a 2006 rulemaking for this source category, the record demonstrated that the maximum individual cancer risk for ordinary area source dry cleaners was 220-in-1 million, and that for those dry cleaners co-located with other commercial businesses, the risk was 1,000-in-1 million. Despite these extremely high cancer risks, EPA declined to set standards in the 2006 rulemaking, and following a voluntary remand in which EPA promised to expeditiously reconsider this decision, it has recently reaffirmed that it does not intend to set standards designed to reduce these risks.[112]

All of this demonstrates that there is a significant mismatch between EPA's regulatory authority under TSCA and its authority under the Clean Air Act (and likely other statutes EPA administers). This mismatch means that in circumstances where TSCA requires regulation to fully eliminate unreasonable risk, EPA's other authorities may be significantly less stringent; indeed, standing on their own, they may enable EPA to avoid regulation entirely.

Conclusion

When EPA released the Fenceline Assessment Approach, Assistant Administrator Dr. Michal Freedhoff said, "To protect human health and the environment, we must evaluate and understand *all* chemical exposures to communities, particularly historically underserved

[110] National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing Residual Risk and Technology Review, 85 Fed. Reg. 49,084 (Aug. 12, 2020) (to be codified at 40 C.F.R. pt. 63) (expressing EPA's decision not to bring risk below the Clean Air Act benchmark was due to what the Agency called "uncertainties" in emission data and health effects determination). A reconsideration petition filed by RISE St. James and other community groups and a petition for review of this final rule are currently pending to challenge this action as insufficient to protect public health as the Clean Air Act requires. EPA also has a pending proposal on reconsideration to reaffirm the use of the 2016 IRIS value for ethylene oxide. Reconsideration of the 2020 National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing Residual Risk and Technology Review, 87 Fed. Reg. 6466 (Feb. 4, 2022) (to be codified at 40 C.F.R. pt. 63). Reaffirming that value should remove or reduce the so-called "uncertainties" on which EPA relied to try to avoid reducing health risk below the 100-in-1 million benchmark.

[111] 42 U.S.C. § 7412(d)(5), (f)(5) (authorizing EPA to set area source standards based on generally available control technologies, a technological approach, in lieu of setting health based standards under 112(f)).

[112] Sierra Club & Earthjustice, *Comments on Proposed National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities Technology Review*, Docket No. EPA-HQ-OAR-2005-0155-0603 (Feb. 22, 2022), https://www.regulations.gov/comment/EPA-HQ-OAR-2005-0155-0603 (click "Download"); *see* National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities Technology Review, 86 Fed. Reg. 73,207 (Dec. 27, 2021) (to be codified at 40 C.F.R. pt. 63).

communities who have been disproportionately exposed to pollution for generations."[113] We agree, and we fully support EPA's efforts to include fenceline community risks in its TSCA risk evaluations. In order to "evaluate and understand all chemical exposures to communities,"[114] however, EPA must broaden and strengthen its draft Fenceline Assessment Approach.

Those changes should begin today as opposed to waiting for a future version of the Fenceline Assessment Approach, which may be years down the road. For chemicals that have been previously evaluated under TSCA, EPA should make near-term revisions to the Fenceline Assessment Approach that would neither require the re-opening of those risk evaluations nor delay EPA's risk management rules. For instance, EPA should use or increase uncertainty factors—which are a critical part of the risk assessment process and some of which are already incorporated into the Fenceline Assessment Approach—to account for known but unquantified risks to fenceline communities, including the increased risks from cumulative exposures to multiple chemicals and from chemical and non-chemical stressors that increase susceptibility. EPA can also use the same models and information included in the Fenceline Assessment Approach to calculate community exposures from multiple facilities that release the same chemical. This "Version 1.5" of the Fenceline Assessment Approach would enable EPA to ensure that its risk management rules address the unreasonable risks facing fenceline communities, would provide additional support for those rules, and would inform the risk management analyses required by TSCA section 6(c), without delaying the finalization of those essential rules.

Longer term, before completing any additional risk evaluations, EPA should propose and seek comment on a revised Fenceline Assessment Approach that fully accounts for fenceline communities' exposures and risks. Under other programs, such as the Clean Air Act's residual risk assessments, EPA already aggregates emissions from multiple sources (including different facilities in the same source category) and considers the cumulative effects of chronic exposures to multiple carcinogens or non-carcinogens that affect the same target organ system.[115] EPA's 2017 Air Toxics Screening Assessment also aggregates risk from multiple sources and factors in "background . . . pollutant levels found in a place even with no nearby emissions of those pollutants."[116] While there are serious gaps in those assessments as well, EPA can build upon its existing approaches to develop a more complete and realistic framework for fenceline community assessments. Version 2.0 of the Fenceline Assessment Approach should address the issues discussed above, and it should be developed in consultation with impacted communities and the federal committees dedicated to environmental justice, such as the NEJAC and WHEJAC.

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[113] *EPA Releases Screening Methodology to Evaluate Chemical Exposures and Risks to Fenceline Communities*, EPA (Jan. 21, 2022) (emphasis added), https://www.epa.gov/newsreleases/epa-releases-screening-methodology-evaluate-chemical-exposures-and-risks-fenceline.

[114] *Id.*

[115] *See, e.g.,* EPA, *Final Residual Risk Assessment for the Petroleum Refining Source Sector* 22 (2015), https://www.regulations.gov/document/EPA-HQ-OAR-2010-0682-0800 (click "Download") ("[T]he effect of multiple facilities in the same source category on the same receptor are estimated."); *id.* at 34 ("Since most or all receptors in these assessments receive exposures to multiple pollutants rather than a single pollutant, we estimated the . . . health risks associated with all the exposures from a particular source category combined."). There are significant flaws in the Residual Risk Assessment for the Petroleum Refining Source Sector, which is not a model for how EPA should conduct cumulative and aggregate exposure assessments but rather a recognition that EPA already has the tools needed to measure such exposures and has already begun to do so in other contexts.

[116] *2017 AirToxScreen: Assessment Methods,* EPA, https://www.epa.gov/AirToxScreen/2017-airtoxscreen-assessment-methods (last updated Mar. 15, 2022).

If you have any questions about these comments, please contact Jonathan Kalmuss-Katz, Earthjustice, at jkalmusskatz@earthjustice.org. Thank you for your consideration.

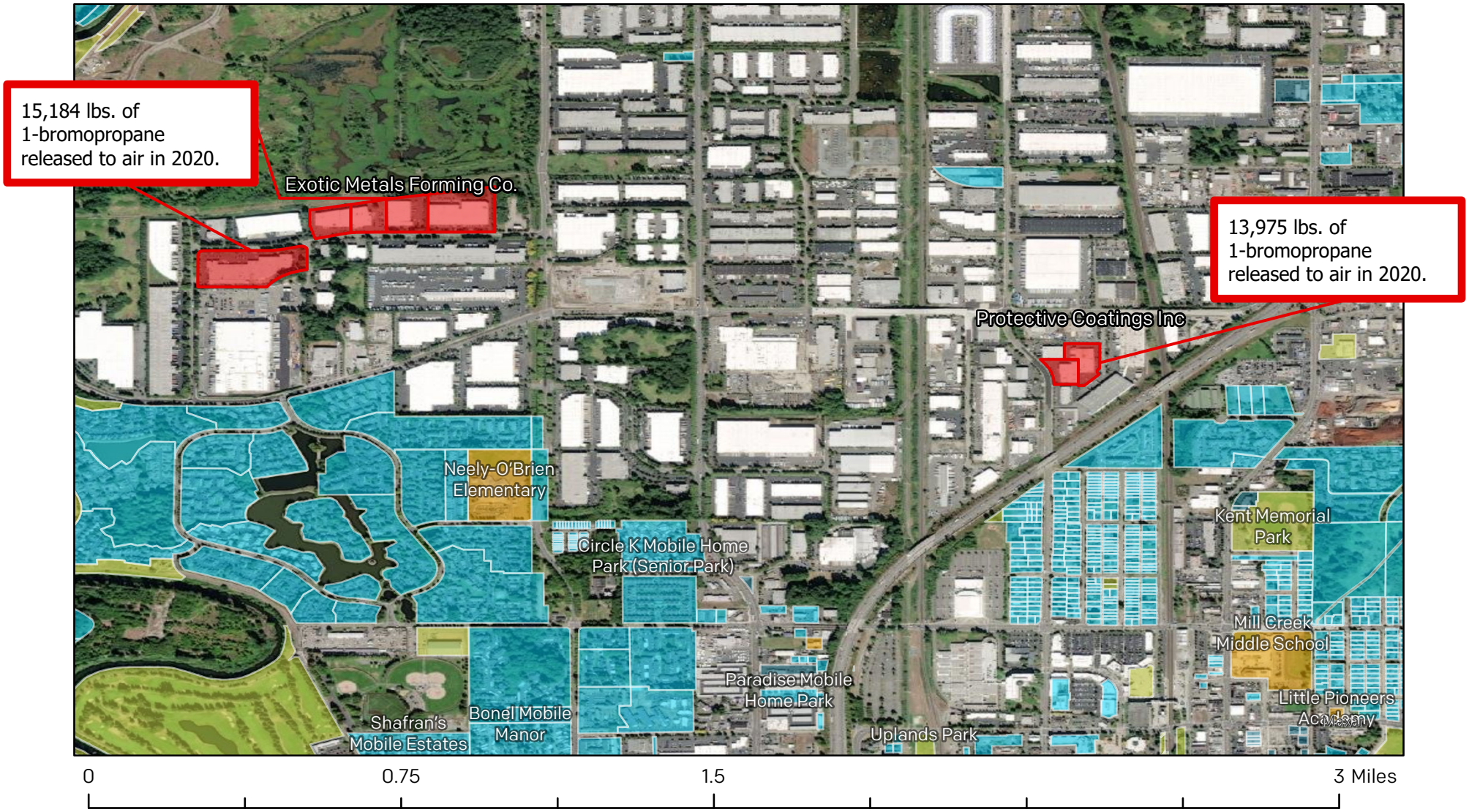
Respectfully submitted,

Black Women for Wellness
Buckeye Environmental Network
Center for Environmental Health
Center for Environmental Transformation
Coming Clean
Defend Our Health
Earthjustice
Environmental Justice Health Alliance for Chemical Policy Reform
Environmental Protection Network
Green America
Learning Disabilities Association of America
Learning Disabilities Association of Illinois
Learning Disabilities Association of Texas
Locust Point Community Garden
Los Jardines Institute
Louisiana Environmental Action Network
Material Research L3C
Moms for a Nontoxic New York
National Family Farm Coalition
Natural Resources Defense Council
REACT - Rubbertown Emergency ACTion
Science and Environmental Health Network
Sierra Club
Texas Environmental Justice Advocacy Services
Women's Voices for the Earth

Exhibit 1

Fenceline Community Exposures in Kent, Washington*

**Map does not depict all exposure sources or all chemicals released in Kent, WA.*



TRI Facility Emitting 1-Bromopropane

Points of Interest

- Residential
- Schools and Daycare
- Medical/Dental
- Recreational

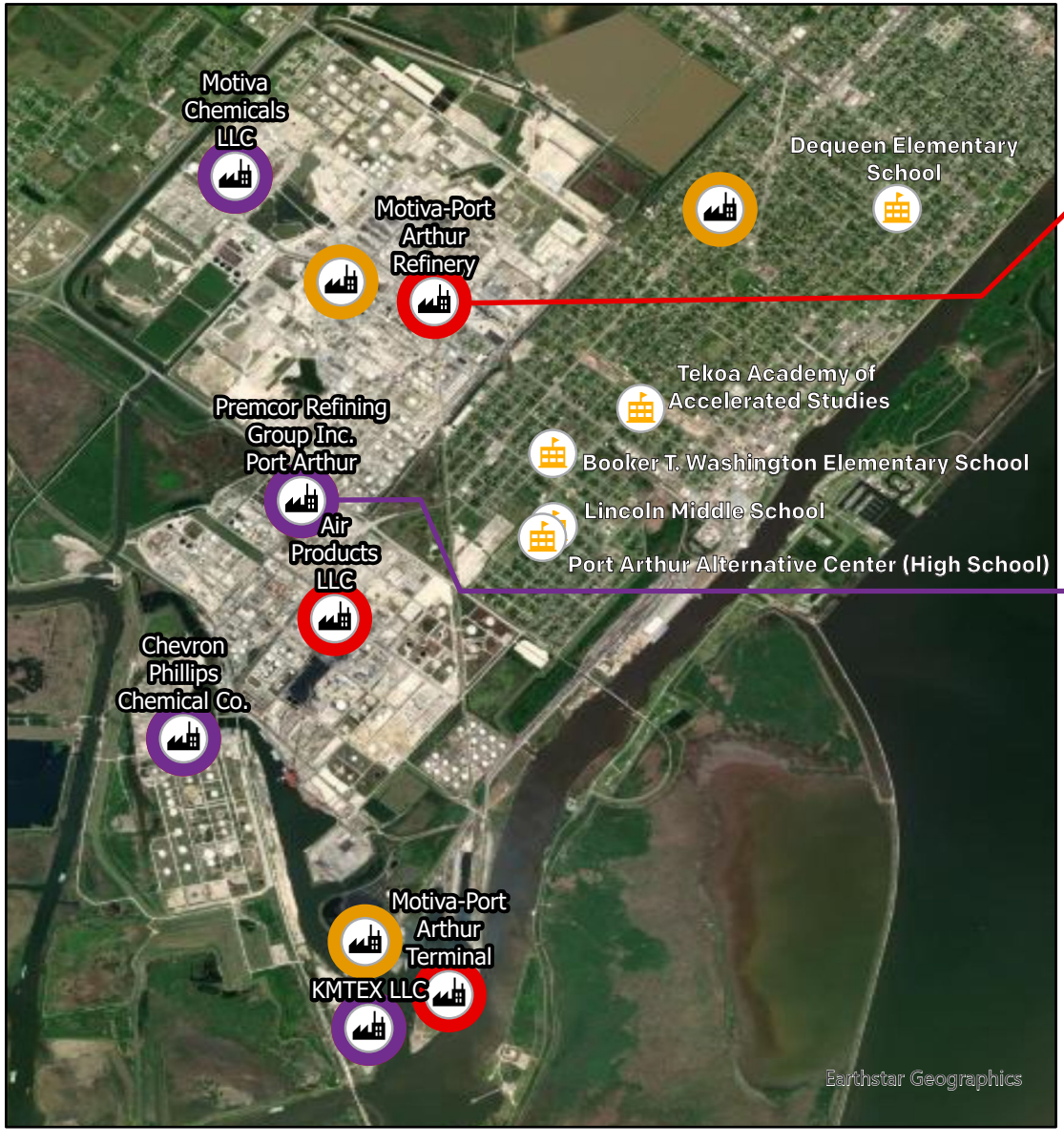
Map by Earthjustice

Data sources:
Toxics Release Inventory;
King County (provided by permission)

Exhibit 2

Fenceline Community Exposures in Port Arthur, Texas*

**Map does not depict all exposures sources or all chemicals released in Port Arthur, TX.*



From top:

Aerial shot of Port Arthur neighborhood bordering Motiva refinery; young people playing basketball by Valero refinery.

ENVIRONMENTAL INTEGRITY PROJECT

Map by Earthjustice

Data sources:
Toxics Release Inventory;
National Center for Education Statistics

0 0.75 1.5 3 Miles

TRI Facilities Emitting..

- 1,3-Butadiene
- Chemicals with Potential Cumulative Impact*
- Other Chemicals

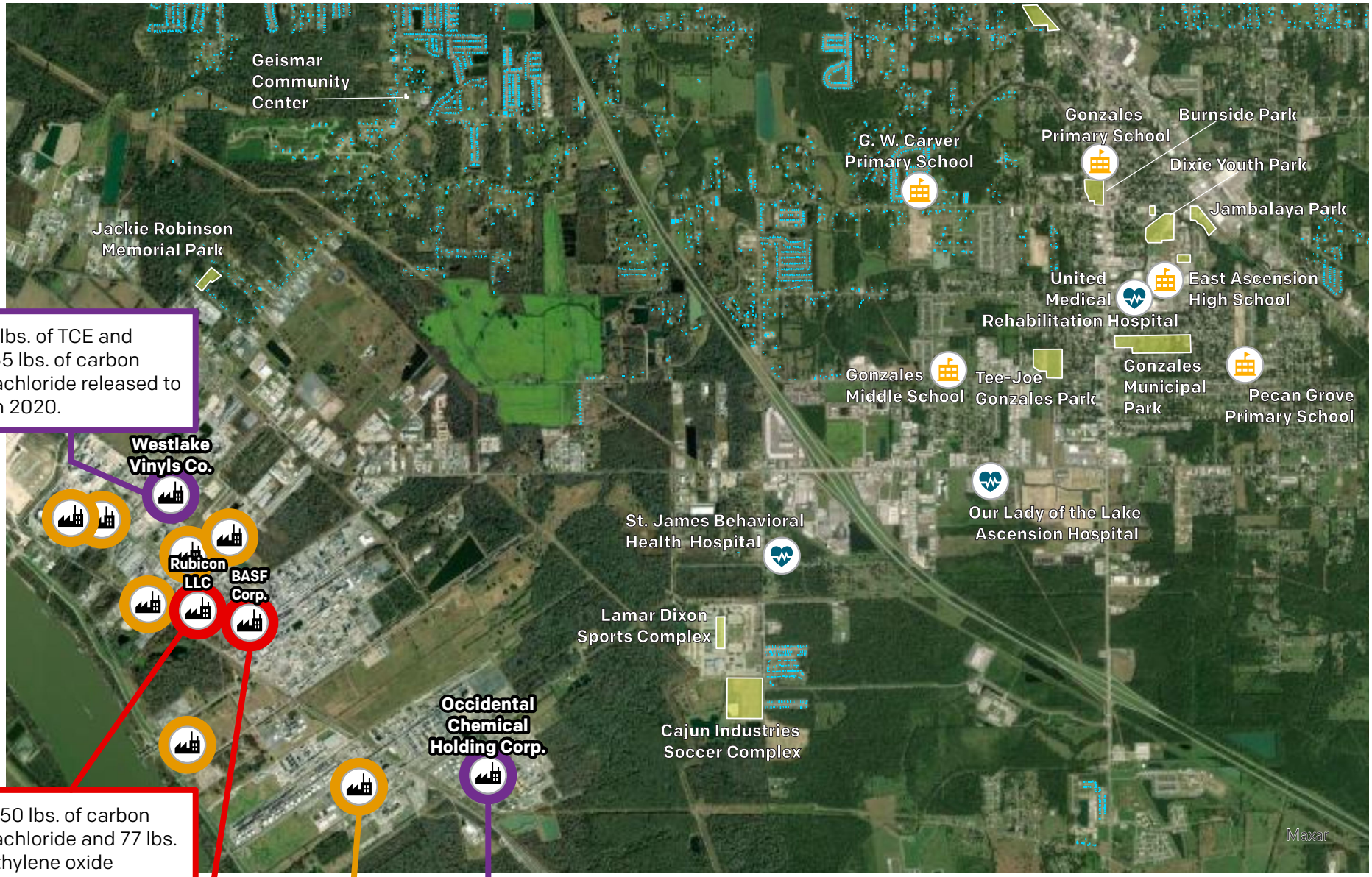
Schools

**May cause cumulative effects when combined with 1,3-butadiene, identified based on common health effects in EPA's TRI Toxics Tracker.*

Exhibit 3

Fenceline Community Exposures in Geismar and Surrounding Areas, Ascension Parish, LA*

**Map does not depict all exposure sources or all chemicals released in Geismar or Ascension Parish, LA.*



755 lbs. of TCE and 2,055 lbs. of carbon tetrachloride released to air in 2020.

20,950 lbs. of carbon tetrachloride and 77 lbs. of ethylene oxide released to air in 2020.

2,220 lbs. of carbon tetrachloride and 13,530 lbs. of ethylene oxide released to air in 2020.

Shell Chemical LP 5,904 lbs. of ethylene oxide released to air in 2020.

115 lbs. of TCE and 44,733 lbs. of carbon tetrachloride released to air in 2020.

0 0.38 0.75 1.5 Miles

TRI Facility Emitting..

- Carbon Tetrachloride and TCE
- Carbon Tetrachloride
- Other Chemicals

- Hospitals
- Schools
- Residential Buildings
- Parks and Recreation

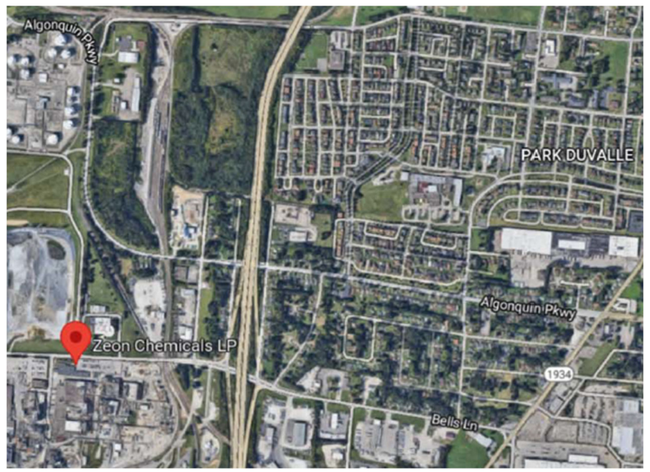
Map by Earthjustice

Data sources: Toxics Release Inventory; Microsoft Building Footprints; National Center for Education Statistics; Homeland Infrastructure Foundation - Level Data; Ascension Parish Government; City of Gonzales

Exhibit 4

Zeon Chemicals – Louisville, Kentucky

Unplanned Releases and Leaks of 1,3-Butadiene



June 20, 2012

– 12 lbs. of 1,3-Butadiene

November 24, 2014

– 19 lbs. of 1,3 Butadiene

November 19, 2021

– 10 lbs. 1,3-Butadiene

2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

March 7, 2014

– 15 gal. of 1,3-Butadiene

December 1, 2017

– 701 lbs. 1,3-Butadiene

January 31, 2022

– >10 lbs. 1,3 butadiene