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Remarks Following 6/2/23 Teleconference with OMB

Re: National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities

June 2, 2023

Ref. Docket ID No. EPA-HQ-OAR-2002-0083

Thank you for the opportunity to provide remarks following our 6/2/23 teleconference with OMB. The following remarks are relevant to our conversation and were too lengthy to deliver during that 30-minute phone call.

The Breathe Project is a Southwestern Pennsylvania organization that avails itself of top-level health, epidemiological, and air quality science and public health information. We are a collaboration of over 65 organizations working to improve air quality, eliminate climate pollution and make our region a healthy and prosperous place to live.

The Breathe Project emphasizes the need to update the National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities to address ongoing, severe health impacts on residents of the Monongahela Valley in Southwestern Pennsylvania, the site of the U.S. Steel's integrated Mon Valley Works.

SWPA clearly needs a more health protective standard for hazardous air pollutants from steelmaking facilities.

The current situation in Allegheny County is untenable. The interconnected 3 U.S. Steel facilities in the Monongahela Valley, the Clairton Coke Works, Edgar Thomson Steel Plant, and Irvin Works emit severe levels of hazardous air pollutants, metals, benzene, and lead in addition to SO₂, NO_x, PM_{2.5} and H₂S pollution that harm health.

Allegheny County is in the top 1% of all counties for cancer risk from point source air toxics emissions ([Cancer Risk in Allegheny County, Pa., May 2021](#)). Nearly 90% of the point source cancer risk in Allegheny County is attributable to coke oven emissions, with 90% of those emissions coming from the Clairton facility. ([Cancer Risk in Allegheny County, Pa., May 2021](#)).

People in the Mon Valley already have air that is worse than 91 percent of the entire country for fine particulate matter, and it is well known that particles are carriers for hazardous air pollutants that are delivered directly into the bloodstream of residents.

Communities where the Mon Valley Works facilities are located are environmental justice communities. Approximately 21,000 people live in Braddock and North Braddock within a 2-mile radius of Edgar Thomson. Approximately 130,000 people live within a 5-mile radius of the Clairton Coke Works property. 1/3 of the people have low income. 36 percent are minority population, primarily African American, and 1/5 are older than 64 ([EPA EJ Mapper Tool](#)).

In 2022 these residents have experienced air quality being ranked in the [top-10 worst airsheds](#) in the US 40% of all days for at least a portion of the day based on EPA's Air Quality Index hourly values. These areas ranked as the #1 worst airshed about 10% of all days (with exceedances of the PM 2.5 particle standards multiple times). The Mon Valley plants cannot continue to limp along at the expense of the health of people. Many residents know too well the toll that high levels toxics emissions take on their lungs and heart health.

A 2017 [study of asthma in Mon Valley regional schools](#) found children exposed to Mon Valley air pollution had nearly a two-fold risk of having a diagnosis of asthma. In the city of Clairton, where North America's largest coking operation and the region's largest source of pollution exists, 34% of the children were at risk for asthma compared to the national rate of 8% and the state and county rates of 10-13%.

In 2022, 179 out of 365 days were considered not good air quality days. In 2021, 200 out of 365 days were considered not good air quality days. According to an analysis of our region's pollution sources from the National Emissions Inventory, particle pollution from stationary industrial point source pollution is the largest contributor to our region's pollution, [accounting for approximately half of our region's pollution](#). An analysis of data from one of our region's monitors in Allegheny County, Liberty, registered annual particulate matter (PM 2.5) concentrations worse than 90% of all monitors in the U.S. Four other monitors in Allegheny County measured annual PM 2.5 levels worse than 70% of the U.S.

Allegheny County, particularly in the Mon Valley near the Liberty Monitor, experiences a substantial number of days with temperature inversions, and these inversions have large impacts on regional air quality. We know that these events frequently occur in the overnight or early morning hours when atmospheric conditions and low wind velocity conditions trap pollution emitted overnight by industrial operators in river valley communities.

Based on EPA's Highest-10 NowCast AQI Locations data, which tracks which regions of the country rank in the top-10 worst airsheds, based on Air Quality Index information on an hourly basis, our county has appeared on this [top-10 worst list](#) about 40% of all days and #1 worst over 10% of all days in 2022.

The bulk of these appearances occurred in the spring, early summer, and late fall periods of time, when wildfire regions were not dominating this list, as was the case during summer and early fall periods of time, and especially when these overnight temperature inversions were more frequent.

A [Clean Air Task Force analysis of surface emissions under inversion conditions](#) from 2016 – 2019 showed that these temperature inversions augment the pollution gradient to be nearly a factor of 2.0 at the Liberty monitor (to 19 ug/m3 on average) when compared with surrounding monitors (10 ug/m3) under strong inversion conditions. The results are shown below as **Figure 1**. These events can cause short-term spikes in air quality that frequently exceed 150 (Unhealthy for Everyone) level on the AQI for at least several hours in the overnight period that then decrease when the inversions dissipate, typically after 11 am. These weather dynamics result in the 24-hour average coming in just under the 35ug/m3 24-hour standard; however, a large portion of the population breathes high levels of pollution in the overnight hours, producing frequent complaints about air quality.

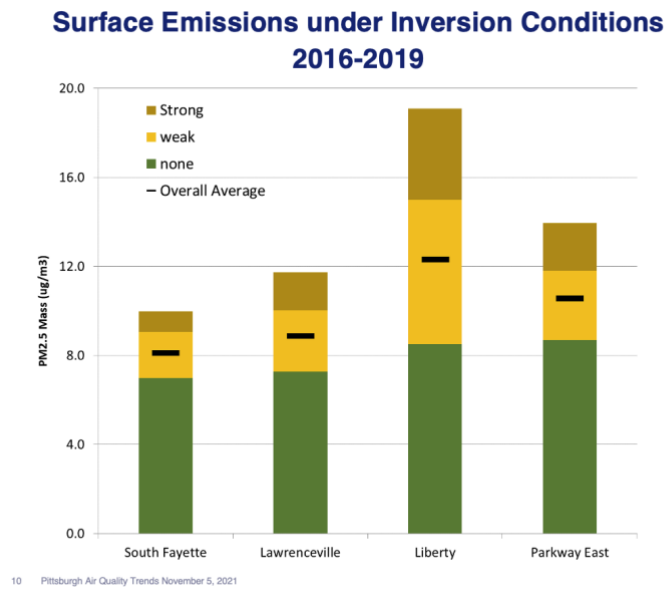


Figure 1: Clean Air Task Force Analysis Showing Inversion Augmentation of pollution from Temperature Inversion at Monitoring sites in Allegheny County, PA. Inversions cause gradient to be nearly a factor of 2 (10 to 19.1) at the Liberty Monitor, the worst performing monitor in Allegheny County.

Short-term spikes in pollution at the Liberty Monitor in Allegheny County impact the health of residents who are exposed to high levels of pollution for several hours at a time. These short-term exposures are health impactful.

The Create Lab at Carnegie Mellon University has created a crowdsourced app that documented over 70,000 air quality complaints over 4 years. These complaints are based on people smelling bad air, which has been shown to have a [strong correlation](#) with sulfur and VOC emissions. The visualization of these reports, in another app, “Plume Pgh,” shows how weather inversions trap these pollutants in the Mon Valley, resulting in these smell reports that occur in the waking hours, when people get up and enter the dome of pollution in the mornings.

Additionally, other evidence of the impact of these inversions can be seen on [cameras that are pointed at polluting facilities in the Mon Valley](#), such as at the [Clairton Coke Works](#) and the Edgar Thomson Works.

Our region’s 2.6 million people are at risk unless the air toxics NESHAP standards are revised to protect health. This includes [vulnerable populations who bear disproportionate risks](#) from current levels of air pollution: 55,269 children with pediatric asthma; 213,963 people with adult asthma; 160,478 people with COPD; 228,249 people with cardiovascular disease; 267,874 people living with low incomes; and 372,912 people of color. The environmental justice concerns are clear, substantial, and must play a prominent role in setting updated standards.

The Breathe Project encourages OMB as well as the EPA and Administrator Regan to set standards that reduce the risks of exposure to hazardous air pollutants from steel and coking facilities. Let’s save thousands of lives, reduce burdens on vulnerable people, and take action that makes everyone proud of our country by embracing these improvements.

Thank you for your time and consideration.

Sincerely,

Matthew M. Mehalik, Ph.D.
Executive Director
Breathe Project