

Cleveland-Cliffs Steel Mills, Indiana Harbor

About the Facility: Cleveland-Cliffs operates two steel mills in East Chicago, Indiana at Indiana Harbor, formerly owned by Inland Steel and LTV. These mills cover 2,600 acres of lakeshore and collectively emit tons of criteria pollutants every year.



About the Permits: The Indiana Department of Environmental Protection (IDEM) issues air permits that limit the amount of pollution facilities can emit into the ambient air in accordance with Title V of the Clean Air Act. IDEM is currently reviewing the Cleveland-Cliffs Indiana Harbor steel mills permits for renewal, and the public has an opportunity to comment on them until January 16th. Additionally, IDEM will explain and answer questions about the permits at a public meeting hosted at East Chicago Center High School on January 10th at 6pm. The permits for the Indiana Harbor East and West are separate but due to their similarities in location and functionality, we address both in this fact sheet.

Five Main Concerns with the Proposed Permits

Failure to Advance Environmental Justice

The draft permits fail to acknowledge that both facilities are located within overburdened communities. More than 95% of the 18,000 residents who live within 3-miles of the facilities are Black or Latino. These neighborhoods have some of the highest levels in Indiana for many of the EPA's Environmental Justice indexes in the EJ Screen mapping tool. IDEM should conduct an environmental justice analysis to determine the effects this permit will have on the surrounding community, whether the impacts will be disproportionately high and adverse, and how to mitigate those impacts. Furthermore, with over 50 major air pollution sources within a 5-mile radius around the facilities, IDEM should also conduct a cumulative impact analysis. This analysis should analyze whether the permit is truly protective of the public health by considering the cumulative effect of the facilities and surrounding pollution on the surrounding community.

Failure to Significantly Reduce NOx Emissions

Nitrogen oxides ("NOx") are an air pollutant created by burning fuel that can irritate the eyes, nose, throat, and lungs. They rapidly break down in the atmosphere when reacting with other substances. And when NOx reacts to sunlight and volatile organic compounds ("VOCs"), it forms ozone. Ozone exposure is directly linked to respiratory illness and heart disease, with even brief ambient exposure linked to asthma exacerbations, emergency room visits, missed school, and even death (mostly by sensitive persons). There is no greater stationary source of NOx in Lake County than the steel mills in Indiana Harbor.

And due to Northern Lake County being designated as moderate non-attainment for ozone, IDEM must find ways to

*Public Meeting
Jan 10th, 2023
6pm CT (7pm EST)*

*East Chicago Center High
School
1100 West Columbus
Drive, East Chicago,
Indiana 46312*





reduce NOx emissions in the atmosphere. One reasonable solution is requiring the steel mills to install low-NOx burners, which can significantly reduce NOx emissions from various sources within the steel mill. The draft permits, however, do not require low-NOx burners or any other improvements that would significantly reduce NOx emissions from current levels.

Failure to Improve Preventive Maintenance Programs

The Indiana Harbor East and West facilities are enormous and highly complex, with an array of fugitive emissions sources responsible for hundreds of tons of particulate matter air pollution per year. It is imperative that these facilities have detailed and actionable preventative maintenance plans (“PMPs”), operation maintenance and monitoring (“OMM”) plans, and operation and maintenance (“O&M”) plans. The draft permits fall short. For instance, the Fugitive Dust Control Plan for both facilities are, at most, aspirational for controlling fugitive emissions, lacking key details or any real accountability mechanism. Without a detailed and actionable plan and with no significant inspection or enforcement efforts, fugitive emissions will not be reduced. IDEM must review all such plans for both facilities, revise them to ensure compliance with the Part 70 permit, and publish all PMPs, OMM plans, and O&M plans for public review.

Failure to Install Crucial Particulate Monitoring

The Indiana Harbor East facility routinely reports violations of opacity limits for Blast Furnace No.7 and Basic Oxygen Furnace No.4. “Opacity” is a surrogate for the criteria pollutant particulate matter (“PM”). Particulate matter includes soot, dust, and other fine particles of pollution, many small enough to bypass the body’s natural defenses and enter the blood stream. Due to the seriousness of PM emissions and the regularity of violations, IDEM must require the installation of continuous opacity monitoring system (“COMS”) to monitor continual 24/7 compliance of the opacity limits in the permit.

Failure to Require Shutdown of Remaining Sinter Plants

Both the East and West facilities at Indiana Harbor are permitted to operate sinter plants. Sintering is an archaic form of steelmaking that uses iron in the form of fine powder instead of the iron ore pellets that are widely used today to make steel. The sintering process produces significantly higher volumes of toxic emissions, including tons of lead, than use of iron ore pellets. The Cleveland-Cliffs facilities do not currently operate their sinter plants, but they do have approval to do so in their permits. We believe that IDEM should phase out these sinter plants and shut them down. The steel industry has shown through their adoption of iron pellets that sintering is unnecessary. Given the environmental impact, no justification exists for their operation or approval to operate.

Recommendations for IDEM

1. Conduct an environmental justice analysis and a cumulative impacts analysis, to protect the public health.
2. Require Low-NOx burners or other improvements to reduce nitrogen oxide emissions from current levels.
3. Review all preventative maintenance plans for both facilities and revise them to ensure compliance with the Part 70 permit. Publish all PMPs, OMM plans, and O&M plans for public review.
4. Install continuous capacity monitoring systems to monitor opacity compliance.
5. Phase out sinter plants and shut them down.

Submit public comment online by Jan. 16 at elpc.org/take-action/

