ENVIRONMENTAL LAW & POLICY CENTER

ENVIRONMENTAL INTEGRITY PROJECT

Join us! Wednesday 9/3/25 at 6pm in Gary, IN

U.S. Steel Gary Works: Air Permit Meeting

U.S. Steel Gary Works is the largest integrated steel mill in the United States. It spans 4,000 acres along the Lake Michigan shoreline in Gary, IN near the Indiana Dunes National Park. The Indiana Department of Environmental Management (IDEM) issued a Title V air permit to U.S. Steel Gary Works on May 7, 2025, but the facility applied to significantly modify portions of the permit that regulate particulate matter air pollution from its pig iron caster. IDEM is hosting a meeting on Wednesday September 3rd where the public can ask questions about the permit modification, submit written comment, and discuss any air pollution concerns with IDEM staff.

Public Meeting:
Wed. 9/3/25, 6pm
21st Cent. Charter School
556 Washington - Gary, IN

Submit Public Comment:
anoveer@idem.gov
by Mon. 9/8/25

Our Air Quality is At Risk

Particulate matter (PM) is a type of air pollution, also known as soot, that refers to small particles in the air. PM emissions can have serious health impacts, including decreased lung function, aggravated asthma, irregular heartbeat, and even premature death in people with heart or lung disease.[1] PM also causes hazy skies. Indiana Dunes National Park is ranked one of the Top 10 National Parks for Unhealthy Air and for Hazy Skies.[2] U.S. Steel is requesting to modify sections of its Title V air permit that cover the PM emissions. Here are some problems with these changes, and questions to ask.

Serious Issues with Proposed Permit Modifications

EMISSIONS LIMITS ARE BASED ON IMPOSSIBLE PRODUCTION LEVELS

U.S. Steel can only produce 660,000 tons of pig iron before it hits the PM2.5 emissions limit (the smallest category of PM), and the unit's maximum production rate is only 1,750,000 tons.[3] However, the revised permit sets limits for PM10 and PM filterable at emissions levels that could only be reached if the unit produces closer to 2,000,000 tons of pig iron, much **higher than the unit could ever reach**. This could allow U.S. Steel to claim that the unit is more "environmentally friendly" than it actually is or could even allow USS to claim offset credits for "reducing" its emissions below these emissions limits, even if the unit was emitting at its maximum possible emissions rate.

- This question pertains to the emissions limits set in Condition D.30.1 of the permit. **Shouldn't the emissions limits be set based on realistic and achievable levels of production?**

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[1] U.S. EPA, *Health and Environmental Effects of Particulate Matter (PM)*, available at https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.

[2] Daniel Orozco, et al., *Polluted Parks: How Air Pollution and Climate Change Continue to Harm America's National Parks*, National Parks Conservation Association (NPCA), https://www.npca.org/reports/air-climate-report.

[3] Numbers obtained from Gary Works – Permit Application to Modify Title V Permit – Pig Iron Caster ("Application"), Attachment B at 6 (PDF pg. 16 of Combined Permit Application Documents available at https://ecm.idem.in.gov/cs/idcplg?IdcService=GET_FILE&dID=83754101&dDocName=83758144&Rendition=web&allowInterrupt=1&noSaveAs=1

- Why does the proposed modification set an emissions limit for PM10 that could only be achieved if the unit produced more pig iron than its maximum possible throughput?
- How are the PM10 or PM filterable emissions limits reasonable if those limits could only be achieved by producing amounts of pig iron that would cause a violation of the PM2.5 emissions limits?

NO CLEAR & ENFORCEABLE TERMS. MISSING RELEVANT EMISSIONS SOURCES.

The proposed permit modification **uses variables, rather than actual numbers**, in its compliance equation to estimate PM emissions and determine compliance with emissions limits. The Clean Air Act requires compliance equations to be written with clear and enforceable terms so that IDEM, EPA, and the public can evaluate whether USS is complying with its Title V permit.[4]

Further, the current compliance equation **completely fails to account for emissions that escape from the building** and baghouse filter, known as fugitive emissions. The equation must include all relevant sources of PM emissions. U.S. Steel accounted for fugitive emissions when it set its emissions limit so it must account for them in the compliance equation.

- This question pertains to the compliance equation in Condition D.30.5. **How can the public know whether U.S. Steel is complying with the PM emissions limits** if the permit does not contain a clear compliance equation with actual numbers rather than unclear variables?
- Wouldn't using these variables allow USS to effectively change the permit's requirements every time it conducts new testing and changes the variables?
- Shouldn't USS have to account for fugitive emissions in the compliance equation for the compliance equation to adequately assure that USS is complying with the PM emissions limits?

INADEQUATE TESTING REQUIREMENTS

The proposed modification only requires U.S. Steel to test the unit's PM emissions every 5 years and then update the compliance equation with those testing results. But initial tests show that the emissions levels varied greatly between tests.[5] So, **IDEM must require U.S. Steel to test annually** to assure that the testing results are representative and the compliance equation will adequately assure compliance with the emissions limits.[6]

Additionally, U.S. Steel initially conducted testing to see if the PM emission varied based on the season.[7] But after the winter test results were invalidated, U.S. Steel abandoned this goal. IDEM should require USS to reconduct the winter testing to see if cold weather impacts PM emissions.

- This question pertains to the testing requirements established in Condition D.30.6. How could IDEM be sure that the most recent test results would be representative of 5 years of emissions if the emissions levels vary so much?

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[4] 42 U.S.C. § 7661c(a) and (c); *see also* 40 C.F.R. § 70.6(a)(1) and (3) and *In the Matter of Orange Recycling and Ethanol Production Facility, Pencor-Masada Oxynol, LLC*, (Apr. 8, 2002), https://www.epa.gov/sites/default/files/2015-08/documents/masada-2_decision2001.pdf, at 7 (explaining that a permit's terms must be "sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action").

[5] Testing data available on the Technical Support Document for the Significant Permit Modification ("TSD") App. A at 3 (PDF pg. 253).

[6] *In the Matter of United States Steel Corporation, Clairton Coke Works Permit No. 0052-OP22* (Sept. 18, 2023), https://www.epa.gov/system/files/documents/2023-10/us-steel-clairton-order_9-18-23.pdf, at 9; *see also* 40 C.F.R. § 70.6(a)(3)(i)(B) ("the time period associated with monitoring or other compliance assurance provisions must bear a relationship to the limits with which the monitoring assures compliance.")

[7] Application, Attachment B at 1 (PDF pg. 11).

- How could IDEM be sure that the most recent test results would be representative of year-round emissions if U.S. Steel hasn't tested emissions levels in the winter?

NO MONITORING WHETHER POLLUTION CONTROL DEVICES REDUCE ENOUGH POLLUTION

U.S. Steel is assuming that the unit's baghouse filter is achieving 95% reduction efficiency, and the building is achieving a 70% capture efficiency. But the proposed modification **does not require U.S. Steel to monitor whether those devices are working or explain those assumptions**. IDEM must require USS to monitor to ensure that the devices are working properly and achieving the reduction rates that are assumed in the proposed permit modification.[8]

Additionally, U.S. Steel's initial testing shows that the baghouse filter emissions control device is only achieving around 60% reduction efficiency, much less than the 95% reduction efficiency assumed in the proposed modification. U.S. Steel needs to **analyze why the baghouse filter is performing so poorly** and IDEM must revise the permit to account for that.

- This question pertains to Condition D.30.8 which establishes parametric monitor requirements for the pig iron caster. **Why isn't IDEM requiring U.S. Steel to monitor** whether the baghouse and the hood are working properly, especially when U.S. Steel is assuming that the devices are performing at such a high rate?
- Has U.S. Steel provided any information on why its baghouse filter is achieving much lower efficiency rates than U.S. Steel assumed it would?

PERMIT MODIFICATION REMOVES EMISSIONS SOURCE WITHOUT REAL EVIDENCE

U.S. Steel wants IDEM to remove the loader dump discharge and pig ingot casting discharge processes from the fugitive emissions requirements of the permit just because U.S. Steel did not visually observe any particulate matter or opacity from those processes.[9] **Visual observation alone is not enough** to remove this process so IDEM must require U.S. Steel to continue to account for those fugitive emissions.

- This question pertains to Section A.4(ss) which removes the loader dump discharge and pig ingot casting discharge as fugitive emissions sources. How can USS's visual observations alone accurately determine whether the pig iron handling processes produce fugitive PM emissions?

YOUR VOICE MATTERS TO PROTECT CLEAN AIR

Do you worry about air pollution for your health, your family, or your community? Tell IDEM why strong permits matter to you.

SUBMIT WRITTEN COMMENT

Send an email to anoveer@idem.gov by Monday September 8, 2025.

[8] Numbers derived from the data on the TSD App. A at 3 (PDF pg. 253).
[9] Application, Attachment B at 3 (PDF pg. 13).