UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

IN THE MATTER OF Part 70 Operating Permit Renewal Operation Permit No. T089-46943-00121 Issued to U.S. Steel Corporation – Gary Works One North Broadway, Gary, Indiana Issued by the Indiana Department of Environmental Management	)	PETITION FOR OBJECTION Permit No. T089-46943-00121

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO THE ISSUANCE OF TITLE V PERMIT NO. T089-46943-00121 TO THE U.S. STEEL – GARY WORKS FACILITY

Pursuant to section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d), the Environmental Law & Policy Center ("ELPC"), the Environmental Integrity Project ("EIP"), the Conservation Law Center, Abrams Environmental Law Clinic at the University of Chicago School of Law, BP & Whiting Watch, Faith in Place, Gary Advocates for Responsible Development, Indiana Conservation Voters, Just Transition Northwest Indiana, National Parks Conservation Association, Northern Lake County Environmental Partnership, and Northwestern Pritzker School of Law Bluhm Legal Clinic's Environmental Advocacy Center (collectively, "Petitioners") respectfully petition the Administrator of the U.S. Environmental Protection Agency ("EPA" or "Agency") to object to the Part 70 Operating Permit Renewal No. T089-46943-00121 ("Renewal Permit" or "Permit") issued by the Indiana Department of Environmental Management ("IDEM" or "Department") on April 29, 2025, to U.S. Steel Corporation ("U.S. Steel") for the Gary Works facility ("Gary Works") located at One North

Broadway in Gary, Indiana (IDEM Source ID 089-00316) ("Facility"). The Renewal Permit is attached as Exhibit 1 to this Petition.

As discussed below, EPA must object to the Renewal Permit because it fails to include all applicable requirements of the Clean Air Act, as well as clear and enforceable monitoring requirements sufficient to assure compliance with all applicable requirements.

I. PETITIONERS

ELPC is the Midwest's leading environmental legal advocacy organization. Its mission is to ensure that all people in the region have healthy clean air to breathe, safe clean water to drink, and can live in communities without toxic threats.

EIP is a non-profit, non-partisan watchdog organization founded to advocate for the effective enforcement of environmental laws, with a specific focus on the Clean Air Act and large stationary sources of air pollution such as the Facility.

The Conservation Law Center is a nonprofit that advances conservation in Indiana and across the country through law, advocacy, and education.

Abrams Environmental Law Clinic at the University of Chicago Law School works on behalf of clients ranging from national non-profits to groups of concerned people sitting around a kitchen table in an environmental justice community, to challenge those who pollute illegally, fight for stricter permits, advocate for changes to regulations and laws, hold environmental agencies accountable, and develop innovative approaches for improving the environment.

BP & Whiting Watch is an independent grassroots environmental social media group.

Faith in Place is a multifaith movement and network working throughout Indiana, Illinois, and Wisconsin for environmental justice through connection, education, and advocacy.

Gary Advocates for Responsible Development promotes economic development in the City of Gary that prioritizes environmental justice, community health, and protection of our neighborhoods and natural resources.

Indiana Conservation Voters champions policies that improve our state's environment, economy, and competitive edge. Our clean air initiatives aim to reduce harmful emissions, create jobs by future-proofing key industries like steelmaking, and improve air quality for all Hoosiers.

Just Transition Northwest Indiana ("JTNWI") is a grassroots environmental justice organization that serves the Northwest Indiana region. JTNWI's mission is to educate and organize Northwest Indiana communities and workers, give voice to our shared stories, and support a just transition to a regenerative economy that protects the environment, climate, and future generations.

The National Parks Conservation Association ("NPCA") is the independent, nonpartisan voice of America's national parks. With more than 1.6 million members and supporters, NPCA works to protect and preserve our nation's most iconic and inspirational places for present and future generations.

Northern Lake County Environmental Partnership works to learn more about how the environment affects health in Northern Lake County in order to promote clean environments and good health.

The Northwestern Pritzker School of Law Bluhm Legal Clinic's Environmental Advocacy Center ("EAC") works with communities and professional advocates to address some of the most pressing environmental and energy issues facing our region and planet. The EAC takes on cases and environmental projects that offer unparalleled opportunities for students to practice lawyering and advocacy, and contribute uniquely to environmental problem-solving. The EAC's diverse docket of projects is organized in three primary issue-areas: (1) environmental justice in

Chicagoland; (2) climate change and energy policy advocacy in Illinois; and (3) the protection and restoration of natural resources through litigation and regulatory advocacy under federal environmental statutes.

II. FACILITY DESCRIPTION AND PERMITTING HISTORY

The USS Gary Works integrated steel mill is located along the Northwest Indiana shoreline at the southernmost point of Lake Michigan, adjacent to Indiana Dunes National Park. It began operations in 1909 and was previously the largest integrated steel mill in the world; at 4,000 acres, it remains the largest in the United States. Once Gary's largest single employer (employing over 30,000 workers in the 1970s), it now employs only around 3,700 workers.[1] Gary Works has an annual raw steelmaking capability of 7.5 million net tons and manufactures finished steel and tin products.

Gary Works' immense size and production comes with an environmental cost – the Facility is Indiana's largest single source of both carbon emissions and heavy metal pollution.[2] With four coal-fired blast furnaces, it is the "largest greenhouse gas polluter among more than 200 industrial plants nationwide."[3] National Parks Conservation Association ("NPCA") has identified Gary Works as the ninth largest contributor to regional haze pollution in Indiana with emissions of 1,800

[1] Santul Nerkar, *A City Built on Steel Tries to Reverse Its Decline*, NY Times, Feb. 3, 2024, available at https://www.nytimes.com/2024/02/03/business/economy/gary-indiana-economy.html.
[2] EPA, Greenhouse Gas Data (last accessed February 28, 2024), available at https://ghgdata.epa.gov/ghgp/service/facilityDetail/2022?id=1000418&ds=P&et=&popup=true. *See also* Nick Yavorsky et al., *Great Lakes Near-Zero-Emissions Steel Memo Focus: Indiana*, p. 2, RMI, November 2023, available at https://rmi.org/wp-content/uploads/dlm_uploads/2024/02/IN_steel_memo.pdf; Joseph S. Pete, *Region steel mills rank as three worst carbon emitters nationally*, NWI Times, Sep. 14, 2023, available at https://www.nwitimes.com/news/local/region-steel-mills-rank-as-three-worst-carbon-emitters-nationally/article_1bb44ff8-532c-11ee-88c5-e7fa1201b961.html.
[3] Ben Jealous, *U.S. Steel smothered Gary, Indiana, with heavy pollution. Community activists deserve a say in cleanup.* Chicago Sun-Times, Oct. 24, 2023, available at https://chicago.suntimes.com/columnists/2023/10/24/23929058/steel-mill-pollution-environment-toll-gary-indiana-biden-infrascture-clean-energy-ben-jealous; *see also* Joseph S. Pete, *Region steel mills rank as three worst carbon emitters nationally*, NWI Times, Sep. 14, 2023, available at https://www.nwitimes.com/news/local/region-steel-mills-rank-as-three-worst-carbon-emitters-nationally/article_1bb44ff8-532c-11ee-88c5-e7fa1201b961.html.

tons of SO2, close to 3,000 tons of NOx, and 1,700 tons of PM10 annually.[4] Based on NPCA analysis, this source is likely impacting 20 Class I areas[5] as well as contributing to the Indiana Dunes National Park ranking among the top 10 National Parks with unhealthy air and hazy skies.[6]

As one of the largest integrated steel mills in the world and the largest in North America, Gary Works is composed of multiple emission units and associated equipment. The Facility consists of the following major emission units: (a) Recycling Plant (b) Nos. 4, 6, 8, and 14 Blast Furnaces, (c) No. 1 Basic Oxygen Process (BOP) Shop, (d) No. 2 Q-BOP Shop, (e) Hot Rolling Mill, (f) Continuous Pickling Lines, (g) Sheet Products Division, (h) Tin Division, (i) No. 4 Boiler House, (j) Turbo Boiler House, (k) Coal Pulverization and Air Preheater System (East PCI Coal Pulverization), (l) Pulverized Coal Storage and Feed System (West PCI Coal Pulverization), (m) Railcar Heater, (n) Coal Handling Operations, (o) East Building – Coal Handling, (p) Coal Piles and Haul Roads, (q) Corrective Action Management Unit, (r) Coke Receiving and Handling, (s) Iron Ore Screening, (t) Material Screening, (u) Groundwater Sparging, and (v) Pig Iron Caster.[7] Most of these major emission units are comprised of the key unit plus associated units, process equipment, and operational practices. [8] Gary Works also contains dozens of insignificant activities and fugitive dust sources.[9]

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[4] National Parks conservation Association (NPCA) – Regional Haze Interactive Map, https://arcg.is/i9Hqu.
[5] *Id.*
[6] 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.
[7] Ex. 1, Part 70 Operating Permit Renewal No. T089-46943-00121, U.S. Steel Corporation – Gary Works, One North Broadway, Gary, Indiana 46402 (May 7, 2025) ("Renewal Permit"), *also available at* https://permits.air.idem.in.gov/46943f.pdf, at 12-27.
Note: The final Renewal Permit provided by IDEM is part of one 1136-page PDF file that contains multiple individually-paginated documents (including the final Renewal Permit, Addendum to the Technical Support Document, Appendix A to Addendum to the Technical Support Document, the Technical Support Document, and various letters to U.S. Steel). The Renewal Permit begins on PDF page 4 of 1136 of that file.
[8] *See generally* Renewal Permit at 12-27.
[9] *See generally id.* at 27-30 and 24-25.

As explained by IDEM, the major source for Title V permitting purposes is the integrated steel mill, which is composed of "the primary operation, U.S. Steel – Gary Works (Source ID 089-00121)" and associated collocated on-site contractors.[10] With regard to Title V permitting, IDEM explains that:

> A Part 70 permit has been issued to U.S. Steel – Gary Works (Source ID 089-00121). Separate Administrative Part 70 permits will be issued to each of the on-site contractors, solely for administrative purposes. The companies may maintain separate reporting and compliance certification.[11]

IDEM posted the draft Renewal Permit for the 30-day public comment on February 21, 2024.[12] On March 5, 2024, EIP and a number of Petitioners submitted a request for public hearing and an extension of the public comment period.[13] IDEM subsequently issued a notice announcing a April 25, 2024 public hearing and noting that the public notice period would end on Tuesday, April 29, 2024. On April 29, 2024, EIP and ELPC submitted comments on behalf of themselves and many other Petitioners ("Petitioners' Comments").[14] EPA Region 5 also submitted a comment letter addressing the Renewal Permit on April 29, 2024.[15]

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[10] *Id.* at 12.
[11] *Id*.
[12] Addendum to the Technical Support Document for Permit Renewal No.T089-46943-00121 ("ATSD"), at 1. *Available at* Ex. 1, PDF page 693 of 1136. The ATSD includes copies of the public comments received and ADEM's responses to them.
[13] ATSD at 54.
[14] *See, generally,* ATSD at 54, and Appendix A to Addendum to the Technical Support Document ("Appendix A"), *Available at* Ex. 1, PDF page 693 of 1136. As explained in the ATSD at 55, IDEM Response to Comment 2, "Due to the length of the attachment and complexity of the comments, IDEM responded to these comments in Appendix A to this ATSD. See Appendix A to the ATSD for detailed responses to the Environmental Integrity Project & Environmental Law and Policy Center comments." *See also* Ex. 2, Comment Letter of EIP, ELPC, *et al*. on Permit Renewal No.T089-46943-00121 (April 29, 2024).
Note: For ease of reference and because ATSD and Appendix A copied the substantive text of the comments in this letter while assigning a number to each comment not found in the EIP & ELPC letter, we cite to the ATSD or Appendix A when discussing Petitioners' comments.
[15] *See, generally,* ATSD at 41; *see also* Ex. 3, E-mail from Paymon Danesh, EPA Region 5, Re: U.S. Steel Gary Works T089-46943-00121 - permit comments (April 29, 2024).
Note: For ease of reference and because the ATSD copied the substantive text of these comments, we cite to the ATSD when discussing EPA's comments.

IDEM submitted the proposed Renewal Permit to EPA for its review on March 21, 2025.[16] EPA's 45-day review period ended on May 5, 2025 without an EPA objection, and IDEM issued the final Renewal Permit to U.S. Steel on May 7, 2025.[17] Accordingly, the 60-day public petition period on the Renewal Permit ends on July 4, 2025, and this petition is timely. As required, Petitioners are filing this Petition and Exhibits with the Administrator via the Central Data Exchange and providing copies via certified U.S. mail to IDEM and U.S. Steel.

III. STANDARD OF REVIEW FOR TITLE V PETITIONS

Title V permits must list and assure compliance with all federally enforceable requirements that apply to each major source of air pollution and thus are the primary method for enforcing and assuring compliance with the pollution control requirements of the Clean Air Act ("CAA" or "Act").[18] One primary purpose of Title V is to "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements," thereby increasing source accountability and improving enforcement of CAA requirements.[19]

The Title V permitting authority must ensure that a proposed permit "set[s] forth" conditions sufficient "to assure compliance with all applicable requirements" of the Act.[20] Among other things, a Title V permit must include compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of

[16] Ex. 4, IDEM, Air Quality Permit Status Search, Permit Details for Gary Works (Source ID 089-00316) and Permit Details for Gary Works (Source ID 089-00318), at Milestone Details.
[17] *Id.*
[18] 57 Fed. Reg. 32250, 32258 (July 21, 1992).
[19] *Id*. at 32251.
[20] *In the Matter of Sandy Creek Services, LLC, Sandy Creek Energy Station, McLennan County, TX* (June 30, 2021), https://www.epa.gov/system/files/documents/2021-07/sandy-creek-order_06-30-21.pdf, ("*Sandy Creek Order*"), at 12 (quoting 42 U.S.C. § 7661c(c)).

the permit.[21] Title V regulations require that the permitting authority's rationale for any proposed permit conditions be clear and documented in the permit record.[22] EPA has explained that within the permit record, "permitting authorities have a responsibility to respond to significant comments" received on a proposed permit.[23]

EPA must object to any Title V permit that fails to include all applicable requirements of the Clean Air Act or assure compliance with those requirements.[24] "Applicable requirements" include any requirements of a federally enforceable state implementation plan ("SIP"), any preconstruction requirements that are incorporated into the Title V permit, and various EPA CAA rules that apply to emission units at the source.[25] If EPA does not object to a Title V permit, "*any* person may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection."[26] The Administrator "shall issue an objection" if the petitioner demonstrates "that the permit is not in compliance with the requirements of [the CAA], including the requirements of the applicable implementation plan."[27] The Administrator "shall grant or deny such petition within 60 days after the petition is filed."[28]

[21] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).
[22] 40 C.F.R. § 70.7(a)(5).
[23] *In the Matter of CITGO Refining and Chemicals Co., L.P., West Plant, Corpus Christi, TX* (May 28, 2009), https://www.epa.gov/sites/default/files/2015-08/documents/citgo_corpuschristi_west_response2007.pdf ("*CITGO Order*"), at 7.
[24] 40 C.F.R. § 70.8(c).
[25] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1) and (2)); *In the Matter of Pacific Coast Building Products, Inc., Permit No. A00011, Clark County, NV* (Dec. 10, 1999), https://www.epa.gov/sites/default/files/2015-08/documents/pacific_coast_decision1999.pdf ("*Pacific Coast Order"*) at 7 ("applicable requirements include the requirement to obtain preconstruction permits that comply with preconstruction review requirements under the Act, EPA regulations, and State Implementation Plans").
[26] 42 U.S.C. § 7661d(b)(2) (emphasis added); 40 C.F.R. § 70.8(d).
[27] 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1).
[28] 42 U.S.C. § 7661d(b)(2).

IV. GROUNDS FOR OBJECTION

EPA must object to the Renewal Permit because the permit fails to include and/or assure compliance with all applicable requirements of the Clean Air Act. As explained more fully below, the Renewal Permit:

(1) fails to include adequate monitoring requirements to assure compliance with applicable numeric particulate matter ("PM") emission limits at multiple units;

(2) fails to include adequate and enforceable monitoring requirements to assure compliance with applicable Lake County opacity limits;

(3) fails to include adequate and enforceable monitoring requirements to assure compliance with applicable coal pulverization PM limits;

(4) fails to include any compliance monitoring, recordkeeping, and reporting requirements to assure compliance with blast furnace PM limits; and

(5) fails to include required compliance, corrective action, and operation and maintenance plans.

Since most of the deficiencies discussed in this Petition address inadequate compliance provisions in the Renewal Permit, Section A below summarizes the relevant Part 70 requirements that apply to testing, monitoring, recordkeeping, and reporting requirements, and Sections B through E address how the Renewal Permit fails to meet those requirements for the various applicable requirements raised in public comment. Finally, Section F addresses IDEM's failure to include required compliance and corrective action plans in the Renewal Permit.

A. Each Part 70 permit must set forth testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with all terms and conditions in the permit.

The CAA requires that each Title V permit "shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions."[29] As the relevant permitting authority, IDEM has the responsibility "to ensure

[29] 42 U.S.C. § 7661c(c); *see also* 40 C.F.R. § 70.6(c)(1).

that the [T]itle v permit 'set[s] forth' monitoring to assure compliance with all applicable requirements."[30] Further, any emission limit in a Title V permit must be enforceable as both a legal and practical matter. For a limit to be enforceable as a practical matter, a permit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit.[31] This requires every emission limit to be (a) "accompanied by terms and conditions that require a source to effectively constrain its operations so as to not exceed the relevant emissions threshold… whether by restricting emissions directly or through restricting specific operating parameters," and (b) supported by monitoring, recordkeeping, and reporting requirements "sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action."[32]

As EPA explains, the Part 70 rules address the CAA requirement that all Title V permits include adequate monitoring, and contain three pathways to satisfy those monitoring requirements:

(1) The Title V permit must properly incorporate monitoring requirements contained in applicable requirements; [33]

(2) If an applicable requirement does not contain periodic monitoring, the Title V permit must include periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of compliance with the permit;[34] and

(3) If an applicable requirement contains periodic monitoring that is insufficient to assure compliance with permit terms and conditions, the Title V permit must include supplemental monitoring to assure such compliance.[35]

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[30] *Sandy Creek Order* at 12 (quoting 42 U.S.C. § 7661c(c)).
[31] *See, e.g.*, *In the Matter of Hu Honua Bioenergy Facility, Pepeekeo, HI* (Feb. 7, 2014), https://www.epa.gov/sites/default/files/2015-08/documents/hu_honua_decision2011.pdf ("*Hu Honua Order*"), at 10.
[32] *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 ("*Pencor-Masada Order*"), at 7.
[33] *In the Matter of Shell Deer Park Chemical Plant* (September 24, 2015), https://www.epa.gov/sites/default/files/2015-09/documents/dpr_response2014.pdf ("*Deer Park Order*"), at 18 (citing 40 C.F.R. § 70.6(a)(3)(i)(A, B), (c)(1)).
[34] *Id*. citing 40 C.F.R. § 70.6(a)(3)(i)(B).
[35] *Id*. citing 40 C.F.R. § 70.6(c)(1) and other EPA Title V Petition Orders.

As a general matter, "the time period associated with monitoring or other compliance assurance provisions must bear a relationship to the limits with which the monitoring assures compliance."[36] However, determining whether monitoring contained in a Title V permit is sufficient to assure compliance with any term or condition is a context-specific, case-by-case inquiry.[37] To aid permitting authorities and the public in this fact-specific exercise, EPA identifies several factors that permitting authorities "may consider as a starting point in determining appropriate monitoring" for a facility, including (but not limited to) the variability of emissions and the likelihood of a violation of the requirements.[38] EPA explains that "the rationale for the selected monitoring requirements must be clear and documented in the permit record."[39]

B. The Renewal Permit fails to include adequate monitoring requirements sufficient to assure compliance with applicable numeric PM emission limits at multiple units.

1. Specific Grounds for Objection, Including Citation to Permit Terms

The Renewal Permit contains numerous PM emission limits that are applicable requirements that must be addressed by adequate monitoring to assure compliance. Conditions D.6.2, D.8.1, and D.9.1 address the Lake County PM_{10} Emission Requirements of 326 IAC 6.8-2-38, which are source-specific PM requirements for the Gary Works facility contained in the Indiana SIP.[40] Condition D.7.2 contains specific PM emission limits that were contained in significant permit modification ("SMP") 0089-27690-00121 (issued Oct. 5, 2009) to avoid the

[36] *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 ("*Clairton Order*"), at 9; *see also* 40 C.F.R. § 70.6(a)(3)(i)(B).
[37] *Clairton Order* at 9.
[38] *Id.* (quoting *CITGO Order* at 7–8).
[39] *CITGO Order* at 7–8 (granting petition because permitting authority "did not articulate a rationale for its conclusions that the monitoring requirements… are sufficient to assure compliance"); *see also* 40 C.F.R. § 70 .7(a)(5).
[40] Renewal Permit at 63, 82, and 88; Approval and Promulgation of Air Quality Implementation Plans; Indiana; Revisions to Particulate Matter Rules 73 Fed Reg. 13813(March 14, 2008) (SIP Approval).

requirements of the SIP-approved Prevention of Significant Deterioration ("PSD") permitting program in 326 IAC 2-2.[41] Because each of these conditions are required by the SIP, to avoid SIP requirements, and/or by existing Gary Works air permits, they are "applicable requirements" that must be addressed in a Title V permit.[42]

The specific numeric PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1 are summarized below:

Table 1: Emission Limits with Insufficient Monitoring

Emission Unit	Emission Limit
No. 3 Sinter Plant	Condition D.6.2 - Lake County PM_{10} Emission Requirements for different components of the Sinter Plant expressed as 0.0100 to 0.0300 grains per dry standard cubic foot and 0.43 to 272.57 pounds per hour.[43]
Blast Furnaces	Condition D.7.2 - No. 14 Blast Furnace Stockhouse Baghouse Stack PM and PM_{10} minor limits not to exceed 2.57 pounds of PM per hour and 2.57 pounds of PM_{10} per hour.[44]
No. 1 BOP Shop	Condition D.8.1(a) - Lake County PM_{10} Emission Requirements for different components of the No. 1 BOP Shop expressed as 0.007 to 0.011 grains per dry standard cubic foot and 5.10 to 46.0 pounds per hour.[45]
No. 2 Q-BOP Shop	Condition D.9.1(a) - Lake County PM_{10} Emission Requirements for different components of the No. 2 BOP Shop expressed as 0.007 to 0.0153 grains per dry standard cubic foot and 1.8 to 44.0 pounds per hour.[46]

The Renewal Permit is deficient because it does not contain adequate and enforceable requirements to ensure compliance with the specific numeric PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1. The Renewal Permit is also deficient because the permit record

[41] Renewal Permit at 74; *see generally* EPA Approved Regulations and Statutes in the Indiana SIP, *https://www.epa.gov/air-quality-implementation-plans/epa-approved-regulations-and-statutes-indiana-sip* (listing multiple actions approving the PSD requirements of 326 IAC 2-2 into the Indiana SIP).
[42] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1) and (2)); *Pacific Coast Order* at 7.
[43] Renewal Permit at 63, Conditions D.6.2(a)-(f).
[44] *Id.* at 74, Condition D.7.2(a).
[45] *Id.* at Condition D.8.1(a)(1)-(3).
[46] *Id*. at Condition D.9.1(a)(1)-(10).

does not provide a clear rationale for IDEM's position that the monitoring requirements currently in place are sufficient to determine compliance with these numeric emission limits.

2. Part 70 Requirements Not Met, Issue Raised in Public Comment

Title V permits must contain testing, monitoring, reporting, and recordkeeping requirements sufficient "to assure compliance with the permit terms and conditions,"[47] and "the rationale for the selected monitoring requirements must be clear and documented in the permit record."[48] The Renewal Permit fails to meet the requirements of Part 70 because it fails to include monitoring requirements sufficient to assure continuous compliance with the specific numeric PM emission limits of Conditions D.6.2, D.7.2, D.8.1, and D.9.1 addressed above. Moreover, the lack of clarity in the monitoring terms included in the Permit renders those conditions and the underlying numeric PM emission limits practically unenforceable.

These issues were raised by both EPA and Petitioners in public comments. EPA raised the issue of insufficient monitoring to assure compliance with Lake County PM_{10} Emission Requirements in Condition D.9.1(a)(4), (5), and (10) in Comment #4 on the draft Renewal Permit, stating:[49]

[47] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).
[48] *CITGO Order* at 7-8.
[49] ATSD at 44.
Note: While EPA's Comment 4 refers to the Lake County PM_{10} Emission Requirements in Condition D.9.1(d), (e), and (j), which was the numbering in Condition D.9.1 before IDEM renumbered the provision in response to EPA Comment 6. This Petition will refer to the EPA Comment as addressing the Lake County PM emission limits in D.9.1(a)(4), (5), and (10) since those are the provisions of the Renewal Permit that align with the specific units EPA identified in the comments (i.e., the No. 2 Q-BOP North Flux Handling System Baghouse Stack, the No. 2 Q-BOP South Flux Handling System Baghouse Stack, and the No.2 BOP R-H Vacuum Degasser Slag Condition Stack, respectively).

EPA Comment 4

The permit does not appear to include monitoring to assure compliance with conditions D.9.1(d), (e), and (j), which specify Lake County PM emissions limitations for the Number 2 Q-BOP North and South Flux Handling Systems Baghouse stacks NS6626 and NS6625 (baghouses NS3109 and NS3110), and Number 2 Q-BOP R-H Vacuum Degasser Slag Conditioning stacks S-1 through S-6.

We note the permit does not appear to include a requirement to operate these baghouses to control emissions or associated monitoring or recordkeeping. We request IDEM review the permit and add/identify monitoring as necessary or provide justification why additional monitoring is not necessary to assure compliance.

Petitioners' public comments also stated that numerous numeric PM emission limit requirements in the Renewal Permit were not accompanied by adequate monitoring to assure compliance with those limits. Petitioners' comments identified the specific numeric PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1 and the specific monitoring provisions identified in the Permit to assure compliance, i.e., stack testing conducted once every 2.5 or 5 years, as follows:[50]

Emission Unit	Emission Limit	Monitoring/Testing Requirement
No. 3 Sinter Plant	Lake County Particulate Matter ("PM")[61] Limits expressed grains per dry standard cubic foot and pounds per hour for different components of the No. 3 Sinter Plant.	Once every five year stack test[62]; once every two and a half year stack test.[63]
Blast Furnace	Limits in (c) are for BF No. 14 stockhouse baghouse stack with PM10 emissions not to exceed .022 g/dscf and ten percent opacity. [64]	Once every five year stack test for PM10 from the No. 14 BF baghouse stack; once every five year stack test for PM, PM10, PM2.5 on the No. 14 BF stockhouse baghouse stack.[65]
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No. 1 BOP Shop	Lake County PM10 emissions[68] (a) The PM10 emissions from the No. 1 BOP Shop Hot Metal Transfer and Desulfurization Stations Baghouse discharge shall not exceed 0.007 g/dscf of exhaust air and 15.0 lb/hr. (b) The PM10 emissions from the No. 1 BOP Shop Gas Cleaning System Stacks shall not exceed 0.011 g/dscfof exhaust air and a total of 46.0 lb/hr. (c) The PM10 emissions from the No. 1 BOP CASBell/OB Lancing Baghouse Stack shall not exceed 0.0070 g/dscf of exhaust air and 5.10 lb/hr	Once every five year stack test[69]
No. 2 Q-BOP Shop	Lake County PM10 emissions[70] (a)-(k) include g/dscf and lb/hr emission limits for components of the No. 2 Q-BOP	Once every five year stack test[71]

[50] Appendix A at 23, Table 1 (citing to Conditions D.6.2, D.7.2, D.8.1, and D.9.1; the excerpt provided here contains only those conditions relevant to this Petition and does not include the related footnotes, which are available on page 24 of Appendix A). As explained in n.14, *supra*, because Appendix A to the ATSD copied the substantive text of Petitioners' comments provided in Ex. 2, we cite to the Appendix A when discussing Petitioners' comments.

Petitioners also noted that the Renewal Permit's monitoring provisions "must be revised because the monitoring is not reasonably related to the averaging time to determine compliance with the limits," and that IDEM "failed to provide [any clear] rationale for why they have chosen the infrequent testing" included in the Permit limits noted in the Table.[51]

Thus, the public comments clearly raised the issue that the Renewal Permit did not include sufficient monitoring provisions to assure compliance with the numerical PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1.

3. Analysis of IDEM's Response

a. IDEM's response to EPA

IDEM responded to EPA's comment above (as well as to EPA's Comment 5, which is not related to this ground for objection) as follows:[52]

IDEM Response to EPA Comment 4 and EPA Comment 5

IDEM has reviewed comment 4 and 5 submitted by the EPA and has made changes based upon them. Regarding compliance monitoring for the Number 2 Q-BOP North and South Flux Handling Systems Baghouse stacks NS6626 and NS6625 (baghouses NS3109 and NS3110), IDEM added a requirement for them to be in operation for particulate emissions control at all times the associated operations at the No. 2 Q-BOP Shop are in operation. IDEM also added Visible emissions notations as a monitoring strategy along with recordkeeping for those unit.

IDEM in response to another comment corrected the description for the Slag Conditioning Station servicing the RH Vacuum Degasser. The previous description of S-1 to S-6 being stacks was incorrect as S-1 to S-6 are compartments of the baghouse NS3207. As such IDEM corrected the unit description and added requirements to always keep Baghouse identified as NS3207 be in operation for particulate emissions control at all times the associated operations at the No. 2 Q-BOP Shop are in operation. IDEM also added Visible emissions notations as a monitoring strategy along with recordkeeping for those unit.

IDEM has updated the D.9.2 section (Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]) to include the three flux transfer baghouses NS3112, NS3108 and NS3107. IDEM has also included updated requirements to always keep the three flux transfer baghouses NS3112, NS3108 and NS3107 be in operation for particulate emissions control at all times the associated operations at the No. 2 Q-BOP Shop are in operation. IDEM also added Visible emissions notations as a monitoring strategy along with recordkeeping for those unit.

As a result of this comment, the permit is revised as follows:

[51] *Id.* at 23.
[52] ATSD at 44-45.

D.9.2 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a) (Particulate Matter Limitations for Lake County), particulate emissions from the roof monitors NS6631, NS6632, NS6633 and NS6634 and **from three flux transfer baghouses NS3112, NS3108 and NS3107 exhausting through stacks NS6623, NS6627, and NS6628** shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

...

D.9.7 Particulate Matter Control [326 IAC 2-7-6(6)]

(a) Except as otherwise provided by statute, rule or this permit, the control devices listed below shall be in operation for particulate emissions control at all times the associated operations at the No. 2 Q-BOP Shop are in operation. The control devices are as follows:
...

(8) No. 2 Q-BOP North Flux Handling System Baghouses NS3109

(9) No. 2 Q-BOP South Flux Handling System Baghouses NS3110

(10) The three (3) flux transfer baghouses NS3112, NS3108 and NS3107

(11) No. 2 Q-BOP RH Vacuum Degasser Slag Conditioning Baghouse NS3207

...

D.9.~~9~~**10** Visible Emissions Notations

(a) Visible emission notations of the Desulfurization Stations Baghouse stack NS6144, Secondary Emissions Control Baghouse stack NS6123, No. 2 Q-BOP Gas Cleaning System stacks NS6124 and NS6125, the LMF 3 Hot Fume and Material Handling Baghouse stack NS6148, **No. 2 Q-BOP North Flux Handling System Baghouse stack NS6626, No. 2 Q-BOP South Flux Handling System Baghouse stack NS6625, Three (3) flux transfer baghouses stacks NS6623, NS6627, and NS6628, and the No. 2 Q-BOP RH Vacuum Degasser Slag Conditioning Baghouse Stacks S-1 through S-6 shall be performed once per day during normal daylight operations. A** trained employee shall record whether emissions are normal or abnormal.

...

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.1~~3~~ Record Keeping Requirements

...

(b) To document the compliance status with Condition D.9.~~9~~**10**, the Permittee shall maintain the records of once per day visible emission notations of the Hot Metal Transfer and Desulfurization Stations baghouse discharge NS6144, No. 2 Q-BOP Secondary Emissions Control Baghouse Stack NS6123, No. 2 Q-BOP Gas Cleaning System Stacks NS6124 and NS6125, the LMF 3 Hot Fume and Material Handling Baghouse stack NS6148 ~~and~~ , **No. 2 Q-BOP North Flux Handling System Baghouse stack NS6626,No. 2 Q-BOP South Flux Handling System Baghouse stack NS6625, three (3) flux transfer baghouses stacks NS6623, NS6627, and NS6628, and the No. 2 Q-BOP RH Vacuum Degasser Slag Conditioning Baghouse Stacks S-1 through S-6** exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

...

This response and associated permit revisions fail to address EPA's comment that the Permit does not include monitoring to assure compliance with specific Lake County PM_{10} Emission Requirements in Conditions D.9.1(4), (5), and (10). We also note that while IDEM's response states that "previous description of S-1 to S-6 being stacks was incorrect as S-1 to S-6 are

compartments of the baghouse NS3207 and not stacks," the Renewal Permit continues to refer to S1-S6 as "stacks" in numerous provisions, as apparent in Conditions D.9.10 and D.9.14, so the Renewal Permit continues to be unclear and thus deficient.[53]

As an initial matter, the applicable requirements of the Lake County PM_{10} Emission Requirements contained in 326 IAC 6.8-2-17 do not contain specific monitoring provisions. Accordingly, the "Title V permit must include periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of compliance with the permit."[54] IDEM's response fails to explain how the monitoring provisions for the Lake County PM limits it added in response to the comments – visible emission notations[55] – could yield reliable data sufficient to ensure compliance with specific numeric PM emission limits.[56] IDEM also responded to EPA's comment by emphasizing that it revised the Renewal Permit to require the baghouse controls to be in operation at all times the associated units are in operation (for the No. 2 Q-BOP Shop). That revision, however, was in response to a separate EPA comment, and while requiring continuous baghouse controls might be a positive development, it does address the need for adequate and enforceable monitoring of the PM emission limits in Condition D.9.1.

IDEM's primary response to EPA's comment was to add visible emission notation requirements to the Renewal Permit as a monitoring strategy (along with recordkeeping) for the units with Lake County PM_{10} Emission Requirements. The new visible emission monitoring condition in D.9.10 requires that visible emission notations be performed once per day during normal daylight operations for the units addressed by the Lake County PM limits. IDEM also

[53] ATSD at 44; *see* Renewal Permit at 18 at Unit (g)(1) (describing exhaust through "Stacks S-1 through S-6"), 88 at Unit (g)(1) (same), and 89 at Condition D.9.1.(a)(10) (same); *id.* at 92 at Condition D.9.10(a) (referring to "Baghouse Stacks S-1 through S-6"), and 94 at Condition D.9.14(b) (same).
[54] *Deer Park Order* at 18, citing 40 C.F.R. § 70.6(a)(3)(i)(B).
[55] Renewal Permit at 92, Condition D.9.10.
[56] Renewal Permit at 92, Condition D.9.10.

included Condition D.9.14, which requires keeping daily records of the visible emission notations for those units. However, IDEM fails to explain how visible emission notations taken once per day and included in a daily log assure compliance with the hourly PM and grains per dry standard cubic foot limits for the units described in Conditions D.9.1(4), (5), and (10)**.** The Department, EPA, and the public cannot rely on the visible emission provisions and the associated recordkeeping to determine whether Gary Works is complying with the numeric Lake County PM emission limits in Condition 9.1 and take enforcement action as appropriate. Thus, they are insufficient to assure compliance under Title V.[57]

Further, IDEM fails to explain how the visible emission notations in Condition D.9.10 are sufficient to yield *reliable* data to ensure compliance with the numeric PM emission limits of grains per dry standard cubic foot and in pounds per hour contained in the Lake County PM_{10} Emission Requirements of 326 IAC 6.8-2-38.[58] As discussed in Section C.3 below, Condition D.9.10 contains vague and otherwise unenforceable terms that would not result in the ability to estimate numeric PM emissions as necessary to assure compliance with the specific PM limits in Conditions D.9.1(4), (5), and (10).[59]

b. IDEM's Response to EIP and ELPC

IDEM refused to change the draft permit in response to Petitioners' comments regarding the insufficiency of the once every five-year stack testing to assure compliance with the numeric PM limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1. IDEM reasoned as follows:[60]

[57] *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 ("*Pencor-Masada Order*"), at 7.
[58] *Deer Park Order* at 18, citing 40 C.F.R. § 70.6(a)(3)(i)(B).
[59] *See* discussion in Section C.3, *infra*.
[60] Appendix A at 24.

IDEM Response to EIP and ELPC Comment 16:

The commenter fails to demonstrate that the monitoring requirements included in the permit, viewed as a whole, are insufficient to assure compliance with the applicable PM, PM10, and/or PM2.5 emission limits. In addition to requiring stack testing, the permit includes parametric monitoring requirements to assure compliance with the applicable limits.

While the commenter insists that the stack testing requirements included in the permit are insufficient to assure compliance with short-term PM, PM10, and/or PM2.5 limits, the commenters fail to demonstrate the inadequacy of the additional parametric monitoring requirements included in the permit to assure compliance with the applicable limits.

Because the commenter simply challenges the frequency of stack testing without addressing the overall monitoring scheme for the PM, PM10, and/or PM2.5 limits in the permit, the commenter failed to demonstrate that the monitoring requirements in the permit are insufficient to assure compliance with the limits. Furthermore, contrary to the commenter's contention, the technical support document (TSD) provides the rationale for the selected monitoring regime.

For more information regarding compliance monitoring provisions required for permits under 326 IAC 2 of the Indiana Administrative Code, please refer to IDEM's Compliance Monitoring Guidance Document available on IDEM's website at:
https://www.in.gov/idem/airpermit/resources/guidance-materials-and-resources/

IDEM asserts that Petitioners failed to demonstrate that the monitoring requirements in the Permit "viewed as a whole" are insufficient to assure compliance with the PM limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1. But IDEM fails to support or explain that assertion and does not address the specific issues raised by Petitioners – the inadequacy of the monitoring terms generally, the lack of any reasonable relationship between the emission limits' averaging times and stack testing every 2.5 to 5 years, and the lack of a rationale for such infrequent testing.

Instead, IDEM points generically to parametric monitoring requirements also contained in the Permit but does not even try to explain how such parametric monitoring, in addition to stack testing conducted once every 2.5 to 5 years, assures compliance with the numeric hourly and grains per dry standard cubic foot PM emission limits in the Renewal Permit.[61] Indeed, IDEM's response fails to identify *which* specific parametric monitoring requirements "as a whole" assure compliance with the applicable numeric PM limits.[62]

[61] Appendix A at 24.
[62] *See* Appendix A at 24 (lacking citations to any specific conditions of the Permit).

Assuming that IDEM is referencing the provisions entitled "Parametric Monitoring" within the same Sections as the numeric PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1, then IDEM is referring to the following requirements:[63]

- Condition D.6.9, which requires the Permittee to record the liquid flow rate for associated units at least once per day, record the pressure drop across the baghouse at least once per day when the units are in operation, and comply with the most current Continuous Compliance Plan for the baghouse operation, recording and maintenance.[64]

- Condition D.7.14, which requires the Permittee to record the pressure drop across the baghouse at least once per day for the associated units when the unit is in operation and comply with the most current Continuous Compliance Plan for the baghouse operation, recording and maintenance. [65]

- Condition D.8.9, which requires the Permittee to record the pressure drop across the baghouse at least once per day for the associated units when the unit is in operation; record the pressure drop and flow rate of the scrubbers at least once per day when the units are in operation; and comply with the most current Continuous Compliance Plan for the baghouse operation, recording and maintenance. [66]

- Condition D.9.11, which requires the Permittee to record the pressure drop across the baghouse once per day when the units are in operation; and that the Permittee comply with the most current Continuous Compliance Plan for the baghouse operation, recording and maintenance. [67]

These parametric monitoring requirements do not even reference Conditions D.6.2, D.7.2, D.8.1, and D.9.1, much less state that the provisions should be used to determine compliance with those numeric limits.[68] By contrast, the Renewal Permit specifically states that stack testing is

[63] To the extent that IDEM's response is also referring to other monitoring provisions contained generally in these permit Sections, IDEM's fails to provide the necessary rationale showing those provisions assure compliance with numeric PM emission limits, and some of those provisions (such as visible emission notations discussed in response to EPA's comment above) have other deficiencies that make them inadequate to assure compliance with Conditions D.6.2, D.7.2, D.8.1, and D.9.1.
[64] Renewal Permit at ____.
[65] Renewal Permit at ____.
[66] Renewal Permit at ____.
[67] Renewal Permit at ____.
[68] See generally Conditions D.6.9, D.7.14, D 8.9, D.9.11, and D. 30.8 as cited above.

required "for the purpose of determining compliance with" the numeric PM emission limits.[69] Accordingly, these parametric monitoring terms are not clearly identified as monitoring requirements to assure compliance with the numeric PM emission limits and are thus unenforceable – and insufficient – for that purpose.[70]

IDEM also states, without any citation, that "the technical support document (TSD) provides the rationale for the selected monitoring regime."[71] However, Petitioners have reviewed the TSD and could find no discussion of stack testing or parametric monitoring, nor does the TSD contain any explanation of how the Permit assures compliance with hourly PM emission limits, much less a discussion of how these two techniques work together to do so.[72]

In addition, IDEM completely failed to address Petitioners' comment that the Renewal Permit's monitoring "is not reasonably related to the averaging time to determine compliance with the limits."[73] Petitioners cited to 40 C.F.R. § 70.6(a)(3)(i)(B) to support this argument, which requires that monitoring provisions "yield reliable data from the relevant time period," including "averaging periods…consistent with the applicable requirement." For Gary Works, the applicable requirements of the Indiana SIP and underlying air permits require that PM emissions be limited below certain numerical thresholds in grains per dry standard cubic foot and pounds per hour (Conditions Condition D.6.2, D.8.1(a), and D.9.1.(a)) and pounds per hour (Condition D.7.2). IDEM did not provide any argument as to how stack testing every 2.5 or 5 years and once daily

[69] Conditions D.6.5(a)-(c), D.7.9(b), D.8.5(a)-(b), and D.9.6(a)-(c).
[70] *See Hu Honua Order* at 10 (requiring that enforceable permit limit must clearly specify how emissions will be measured or determined for purposes of demonstrating compliance with the limit); *Pencor-Masada Order* at 7 (similar).
[71] Appendix A at 24.
[72] *See generally* Technical Support Document for a Part 70 Operating Permit Renewal, Permit Renewal No. T089-46943-00121 ("TSD"), at 1-79. *Available at* Ex. 1, PDF page 1037 of 1160. The TSD generally summarizes the emission limits and monitoring and compliance provisions found in Sections D.6, D.7, D.8, and D.9, but it does not provide any substantive discussion of them or explain how the monitoring and compliance provisions assure compliance with specific emission limits.
[73] Appendix A at 23.

parametric monitoring of baghouse pressure drop results in a numeric PM emission amount that can be used to determine compliance with the Permit's hourly and per dry standard cubic foot PM emission limits. Nor could it plausibly do so.[74] Stack testing is a one-time emission measurement, and pressure drop readings do not quantify PM emissions. Instead, pressure drop readings indicate baghouse performance; they are influenced by many factors (such as dust load, cleaning system performance, and air volume) and do not directly correlate with specific, numeric readings of PM emissions.[75]

Likewise, IDEM fails to explain how pressure drop readings and other parametric monitoring, such as requiring that the Permittee record the liquid flow rate for associated units once per day, paired with stack tests required every five years, assures compliance with PM limits of .020 grains per dry standard cubic foot and a total of 200.0 pounds per hour for the Windbox Gas Cleaning System Stacks in Condition D.6.9. For this type of parametric monitoring to be adequate, IDEM would first have to show how the liquid flow rate is related to PM emissions and then establish the flow rate that would result in an exceedance of the PM emission limit. The parametric monitoring requirement in the Renewal Permit fails to provide this specificity, and IDEM failed to explain how this monitoring is reasonably related to assure compliance with the limits.

[74] *See id.* at 27 (Petitioners specifically asked IDEM to explain "how can stack testing for a limited number of hours once every five years accurately predict emission rates (e.g. lb/hr) from the tested unit for the next five years under the units full range of operating conditions?," IDEM explained that it "does not consider testing once every five years, of itself, as determining continuous compliance with requirements" and again relied on other requirements in the Permit.).

[75] *See* FabCo Industrial Services, *Baghouse Differential Pressure: What You Should Know* (Sept. 10, 2024), https://www.fabcoind.com/baghouse-differential-pressure-what-you-should-know*; see also, generally,* EPA, Section 6: Particulate Matter Controls (EPA/452/B-02-001) (Dec. 1998), *https://www3.epa.gov/ttncatc1/cica/files/cs6ch1.pdf* (setting forth the very complex analysis required to determine PM control from baghouses, including the computation of and impact of pressure drop).

The same reasoning applies to the requirement that U.S. Steel record the flow rate of the scrubbers in Condition D.8.9(b) to assure compliance with the associated PM limit in Condition D.8.1. The Renewal Permit does not specify, and IDEM does not explain, which specific scrubber flow rates would result in compliance with the PM emission rates, and thus these scrubber flow rate requirements are insufficient to assure compliance with the numeric PM emission rates in the Renewal Permit.

Overall, EPA has already addressed deficiencies similar to the Gary Works issues discussed above in the *Montgomery County* Title V Order and found that intermittent stack testing paired with other measures that "lack specific instructions on how [those measures] might be used to ensure continuous compliance with" an hourly emission limit are insufficient to address the Title V monitoring requirements.[76] In that Order, EPA found that petitioners demonstrated that a Title V permit was inadequate because the permit only specifically identified stack testing as the compliance mechanism for the hourly limit, while other "countermeasures" were not clearly identified as compliance mechanisms for the hourly limit and/or unenforceable.[77] Similar to the baghouse pressure drop, liquid flow rate, and scrubber flow rate provisions in the Renewal Permit, EPA found the *Montgomery County* permit did not "clearly identify" that the various countermeasures identified by the permitting authority would be used to determine compliance with the permit's hourly emission limit.[78] EPA also noted that "[i]t is not clear how high readings" from the countermeasures "would amount to a permit violation."[79] As explained above, it is similarly unclear how the baghouse pressure drop, liquid flow rate, and scrubber flow rates would

[76] *In the Matter of Montgomery County Resource Recovery Facility*, Pet. No. III-2019-2 (Dec. 11, 2020), https://www.epa.gov/sites/default/files /2020-12/documents/montgomery_response2019.pdf ("*Montgomery County Order*"), at 10.
[77] *Id.* at 9-11.
[78] *Id.* at 10.
[79] *Id.*

amount to compliance with or a violation of hourly PM emission limits at Gary Works. This Renewal Permit is similarly flawed to the *Montgomery County* permit and thus lacks sufficient monitoring requirements to assure compliance with the hourly limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1.

Finally, all of the Conditions discussed above include the requirement to comply with the most current Continuous Compliance Plan ("CCP") for the baghouse operation, recording and maintenance. As discussed in the section regarding missing plans in the Renewal Permit, the CCP plan is not included in the Renewal Permit and thus any provisions referencing it as a source of compliance are insufficient.[80] However, even if the CCP were included in the Renewal Permit, IDEM also fails to explain which specific provisions of the CCP assure compliance with Conditions D.6.2, D.7.2, D.8.1, and D.9.1, and the specific numeric PM emission limits contained within them.

In sum, IDEM fails to adequately respond to EPA's and Petitioners' comments demonstrating that the Renewal Permit lacks clear and enforceable monitoring necessary to assure compliance with PM emission limits in Conditions D.6.2, D.7.2, D.8.1, and D.9.1. Accordingly, EPA must grant this Petition on this issue and either direct IDEM to revise the Renewal Permit to include supplemental monitoring to assure compliance with the hourly and grains per dry standard cubic foot numeric PM emission limits contained in Conditions D.6.2, D.7.2, D.8.1, and D.9.1, or, at a minimum, require IDEM to explain fully how the current permit provisions assure continuous compliance with these numeric emission limits.

[80] *See* discussion in Section F.3, *infra*.

C. The Renewal Permit fails to include adequate and enforceable monitoring requirements sufficient to assure compliance with Lake County opacity limitations applicable to the No. 1 BOP Shop and No. 2 Q-BOP Shop emission units.

1. Specific Grounds for Objection, Including Citation to Permit Terms

In addition to the numeric Lake County PM_{10} Emission Requirements discussed above, 326 IAC 6.8-2-38 also contains opacity limits, which are addressed in Conditions D.8.1 and D.9.1 of the Renewal Permit for the Number 1 Basic Oxygen Process Shop ("No. 1 BOP Shop") and the Number 2 Q-BOP Shop ("No. 2 Q-BOP Shop"), respectively. These opacity limits are source-specific PM requirements contained in the Indiana SIP[81] and are therefore "applicable requirements" that must be addressed in a Title V permit.[82] Condition D.8.1(b) establishes visible emission (opacity) limits for the individual emission units of the No. 1 BOP Shop as follows:[83]

> (b) Pursuant to 326 IAC 6.8-2-38, the visible emissions from the No. 1 Basic Oxygen Process Shop operations shall comply with the following and shall take precedence over those in 326 IAC 5-1-2 with which they conflict:
>
> (1) Opacity from the Hot Metal Transfer and Desulfurization Stations baghouse stack discharge shall not exceed five percent (5%) opacity, for any three (3) minute average.
>
> (2) Opacity from the No. 1 BOP Shop Roof Monitor SS6636 Operations shall not exceed twenty percent (20%) for any three (3) minute average.
>
> (3) Opacity from the BOP Furnace Operations Gas Cleaning System Stacks SS6102 and SS6103 shall not exceed twenty percent (20%), for any six (6) minute average.

Condition D.9.1(b) establishes visible emission (opacity) limits for the individual emission units of the No. 2 Q-BOP Shop as follows:[84]

[81] Renewal Permit at 82, 88-89; 73 Fed. Reg. 23356 (April 30, 2008) (SIP Approval).
[82] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1)); *Pacific Coast Order* at 7.
[83] Renewal Permit at 82.
[84] *Id.* at 88-89.

> (b) Pursuant to 326 IAC 6.8-2-38, the visible emissions from the Number 2 Q-BOP Shop operations shall comply with the following and shall take precedence over those in 326 IAC 5-1-2 with which they conflict:
>
> (1) Opacity from the Number 2 Q-BOP Hot Metal Transfer and Desulfurization Stations Baghouse stack NS6144 shall not exceed five percent (5%) for any three (3) minute average.
>
> (2) Opacity from the Number 2 Q-BOP Gas Cleaning system stacks NS6124 and NS6125 shall not exceed twenty percent (20%) for any six (6) minute average.
>
> (3) Opacity from the Number 2 Q-BOP Roof Monitor NS 6632 shall not exceed twenty percent (20%) for any three (3) minute average.
>
> (4) Opacity from the Number 2 Q-BOP North and South Flux Handling System Baghouse stacks NS6626 and NS6625, (previously known as the flux handling line baghouse shall not exceed five percent (5%) for any three (3) minute average.
>
> (5) Opacity from the Number 2 Q-BOP Secondary Baghouse stack NS6123 shall not exceed five percent (5%) for any three (3) minute average.
>
> (6) Opacity from the Number 2 Q-BOP LMF No. 1 Hot Fume Exhaust Baghouse stack NS6146 shall not exceed five percent (5%) for any three (3) minute average.
>
> (7) Opacity from the Number 2 Q-BOP LMF No. 2 Hot Fume Exhaust Baghouse stack NS6147 shall not exceed five percent (5%) for any, three (3) minute average.

The Renewal Permit fails to include adequate and enforceable monitoring to assure compliance with the opacity limits contained in Condition D.8.1 and Condition D.9.1. Moreover, the permit record does not provide a clear rationale for why IDEM believes the monitoring requirements currently in place are sufficient to determine compliance with these numeric emission limits.

2. Part 70 Requirements Not Met, Issue Raised in Public Comment Unless Impracticable or the Grounds for Such Objection Arose After Such Period

Title V permits must contain testing, monitoring, reporting, and recordkeeping requirements sufficient "to assure compliance with the permit terms and conditions,"[85] and "the rationale for the selected monitoring requirements must be clear and documented in the permit

[85] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).

record."[86] The Renewal Permit fails to meet these requirements, because it fails to include monitoring requirements sufficient to assure continuous compliance with opacity limits. Moreover, the lack of clarity in the monitoring terms of Conditions D.8.8, D.8.9, D.9.10, and D.9.11 renders the Renewal Permit and the underlying opacity limits in Conditions D.8.1 and D.9.1 practically unenforceable.

EPA raised the issue that the draft Renewal Permit did not include the opacity limits of 326 IAC 6.8-2-38(b) in Comment 6, stating:[87]

> **EPA Comment 6**
>
> We note that the permit does not include the opacity limits of 326 IAC 6.8-2-38(b) for the specified emission units at U.S. Steel-Gary Works. We request IDEM review and update the permit as needed to include all applicable requirements or provide justification why these limits are not included.

While petitioners generally object on issues raised in public comment, petitioners can also raise objections where "it was impracticable to raise such objections within such a period, or unless the grounds for such objection arose after such period."[88] The public comment clearly notes that the opacity limits were missing. However, EPA (and other commenters, including Petitioners) could not comment on whether there was adequate monitoring for those opacity limits until IDEM added them. Because the issue of the necessary monitoring for the newly-added Conditions 8.1(b) and 9.1(b) was impracticable to raise within the comment period, the grounds for the objection arose after the comment period had ended and Petitioners can raise it here.[89]

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[86] *CITGO Order* at 7-8.
[87] ATSD at 46. As explained in n.15, *supra*, because the ATSD copied the substantive text of the EPA comments provided in Ex. 3, we cite to the ATSD when discussing EPA's comments.
[88] 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d); *see also* 40 C.F.R. § 70.12(a)(2)(v).
[89] We note that while not specific to the newly-added opacity limits in Conditions D.8.1(b) and D.9.1(b), EPA Comment 8 raised issues about the use of unenforceable terms in monitoring provisions meant to assure compliance with opacity limits in Condition D.22.2. *See* Section C.3, *infra*, for discussion of the inadequacies of the opacity monitoring for Condition D.22.2.

3. Analysis of IDEM's Response

IDEM responded to EPA's comment as follows:[90]

> **IDEM Response to EPA Comment 6**
>
> IDEM agrees with the commenters as it appears the opacity limits were inadvertently removed in a previous permitting action. As a result of this comment, the permit is revised as follows:
>
> [Renumbering the provisions of Condition D.8.1(a)]
>
> [Adding Condition D.8.1(b) as copied above]
>
> ....
>
> [Amending certain testing requirements of D.8.5 to cite specific renumbered provisions of Conditions D.8.1(a)]
>
> ....
>
> Renumbering the provisions of Conditions D.8.1(a)]
>
> ....
>
> [Renumbering the provisions of Condition D.9.1(a)]
>
> [Adding Condition D.9.1(b) as copied above]
>
> ....
>
> [Amending certain testing requirements of D.9.6 to cite specific renumbered provisions of D.9.1(a)]

This response addressed the initial specific issue raised by the EPA comment – the missing opacity limits required by the Lake County PM_{10} Emission Requirements of 326 IAC 6.8-2-38(b). However, IDEM did not make any changes in the Renewal Permit to add monitoring provisions that assure compliance with those opacity limits or identify existing conditions intended to provide such monitoring.

As an initial matter, because the applicable requirements (the Lake County PM_{10} Emission Requirements contained in 326 IAC 6.8-2-38) do not contain specific monitoring provisions, the "Title V permit must include periodic monitoring sufficient to yield reliable data from the relevant

[90] ATSD at 46-49.

time period that are representative of compliance with the permit."[91] If IDEM intended the "compliance monitoring" terms in Conditions D.8.8, D.8.9, D.9.10, and D.9.11 to address the opacity limits in Conditions D.8.1(a) and D.9.1(b), they are not sufficient to yield such reliable data to ensure compliance with those limits.[92] "Normal or abnormal" are vague terms that do not have any clear connection to the applicable numeric emission limits. Likewise, it is not clear what type of training the "trained employee" will receive that would render him or her able to view exhaust from the shop roof monitor and the gas cleaning system stacks and determine whether it meets these limits. Conditions D.8.8(d) and D.9.10(d) note that a "trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process,"[93] but IDEM fails to explain how such a process would result in the ability to estimate emissions against a numerical opacity limit. Moreover, as noted in EPA Comment 8,[94] such training and the resulting observations provide no assurance of compliance with opacity limits if the employees have been trained during a period where normal emissions would be "a potentially nonzero reference amount," i.e., where the condition of the baghouses have been degrading and some unspecified amount of opacity (visible emissions) in the exhaust are thus "normal."[95]

In addition, the specific terms in Conditions D.8.8(a) and D.9.10(a) make the opacity limits of Conditions D.8.1 and D.9.1 respectively, practically unenforceable because they specifically limit the opacity compliance determination, and thus any finding of noncompliance, to a multi-

[91] *Deer Park Order* at 18, citing 40 C.F.R. § 70.6(a)(3)(i)(B).
[92] While other provisions are included in these "compliance monitoring" sections, it is not clear how scrubber failure detection (Conditions D.8.10 and D.9.12) or the presence of a flare flame pilot (Condition D.9.13) could be relied upon as enforceable terms to assure compliance with numeric opacity limits. However, to the extent IDEM intends to rely upon them, they suffer the same inadequacies identified for Conditions D.8.8, D.8.9, D.9.10, and D.9.11 as discussed in the remainder of this section.
[93] Renewal Permit at 84, 92.
[94] *See* discussion at Section D.3, *infra*.
[95] ATSD at 48-49.

step process based entirely on observations of a "trained employee." Not only is this "training" insufficient, as discussed above, but the compliance determination – and the monitoring required to determine compliance – cannot be limited to the source's employees; the CAA requires that it be enforceable by IDEM, EPA, and the public.[96]

Elsewhere in the record, IDEM insists that visible emission notations assure that the "associated control device" is working properly.[97] However, IDEM does not, and cannot, explain how these methods can be used to determine compliance with the varying numeric opacity limits contained in Conditions D.8.1 and D.9.1 and required by the Indiana SIP: 5% opacity for any 3 minute average (basic oxygen furnace iron desulfurization baghouse), 20% opacity for any 3 minute average (No. 1 basic oxygen furnace roof monitor), 20% opacity for any 6 minute average (No. 1 basic oxygen process gas cleaning), 5% opacity, 3 minute average (No. 2 QBOP hot metal desulfurization baghouse), 20% opacity, 6 minute average (No. 2 QBOP gas cleaning), 20% opacity, 3 minute average (No. 2 QBOP roof monitor), 5% opacity, 3 minute average (No. 2 QBOP flux handling line baghouse), 5% opacity, 3 minute average (No. 2 QBOP secondary baghouse), 5% opacity, 3 minute average (No. 2 QBOP ladle metallurgy baghouse No. 1), 5% opacity, 3 minute average (No. 2 QBOP ladle metallurgy baghouse No. 2).

To the extent IDEM also intended to rely on the bag pressure drop readings in Conditions D.8.9 or D.9.11 as a method for determining compliance with the numeric opacity limits in Conditions D.8.1 and D.9.1, such reliance is also inadequate.[98] On their face, Conditions D.8.9 or D.9.11 do not indicate that the bag pressure drop readings should be used to determine compliance with the opacity limits in in Conditions D.8.1 and D.9.1. In addition, Petitioners could not identify

[96] 42 U.S.C. § 7661c(a).
[97] *See* ATSD at 49 and discussion at Section D.3, *infra*.
[98] Renewal Permit at 85, Condition D.8.9(c), and at 92-93, Conditions D.8.9(a)-(c).

any information in the Permit or elsewhere in the record that establishes how these conditions could assure compliance with the opacity limits, and it is unlikely they could do so. Pressure drop readings do not quantify opacity emissions; instead, they are an indicator of baghouse performance, are influenced by many factors (such as dust load, cleaning system performance, and air volume), and do not directly correlate with specific, numeric readings of visible emissions.[99]

As explained above, in order for Conditions D.8.8, D.8.9, D.9.10, and D.9.11 to assure compliance with the specific opacity limits in Conditions D.8.1 and D.9.1, the Renewal Permit must include specific information about how the visible emission notations and bag pressure drop readings correlate to specific opacity levels and include enforceable terms in the Renewal Permit that provide the specific notations and readings that will be used to determine compliance with those opacity limits.[100]

For the reasons above, IDEM has failed to include conditions in the Renewal Permit to assure compliance with the applicable requirements of the newly added opacity limits contained in Conditions D.8.1 and D.9.1. Accordingly, EPA must grant this Petition on this issue and direct IDEM to revise the Renewal Permit to include supplemental monitoring to assure compliance with the opacity limits contained in Conditions D.8.1 and D.9.1, or, at a minimum, require IDEM to explain fully how the current permit provisions assure compliance with the opacity limits.

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[99] *See* FabCo Industrial Services, *Baghouse Differential Pressure: What You Should Know* (Sept. 10, 2024), https://www.fabcoind.com/baghouse-differential-pressure-what-you-should-know*; see also, generally,* EPA, Section 6: Particulate Matter Controls (EPA/452/B-02-001) (Dec. 1998), *https://www3.epa.gov/ttncatc1/cica/files/cs6ch1.pdf* (setting forth the very complex analysis required to determine PM control from baghouses, including the computation of and impact of pressure drop).

[100] *See* discussion at Section B.3, *supra*, and related citations to *Hu Honua Order* at 10, *Pencor-Masada Order* at 7, and *Montgomery County Order* at 9-11.

D. The Renewal Permit fails to include adequate and enforceable monitoring requirements sufficient to assure compliance with PM and PM_{10} minor limitations applicable to the coal pulverization system.

1. Specific Grounds for Objection, Including Citation to Permit Terms

Section D.22.7 of the Renewal Permit addresses source-specific PM and PM_{10} emission requirements for Gary Works pursuant to CP (45) 1895 issued on October 26, 1990 and T089-29907-00121 issued on December 20, 2013.[101] Condition D.22.2 establishes specific PM and PM_{10} emission limits as required by the PSD requirements of 326 IAC 2-2, as follows:[102]

D.22.2 PM and PM_{10} Minor Limits [326 IAC 2-2][326 IAC 2-1.1-5]

Pursuant to CP (45) 1895, issued on October 26, 1990, and T089-29907-00121, issued on December 20, 2013, and in order to render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM and PM10 emissions from the coal pulverization system shall not exceed the emission limits listed in the table below:

Emission Unit	PM (lb/hr)	PM10 (lb/hr)
SS-1 (1A, 1B, and 1C)	1.08	0.63
SS-2 (2A, 2B, and 2C)	1.08	0.63
SS-3 (3A, 3B, and 3C)	1.08	0.63
Line A (SS-5)	0.09	0.06
Line B (SS-6)	0.09	0.06
Pulverized coal storage reservoir (SS-7)	0.09	0.06
RCD-1 (8A)	0.36	0.21
RCD-1 (8B)	0.36	0.21
DC-6 (Stack DC-6)	0.09	0.06
DC-1 (Stack F1)	0.09	0.06
DC-2 (Stack F2)	0.09	0.06
DC-3 (Stack F3)	0.09	0.06
DC-4 (Stack F4)	0.09	0.06
DC-5 (Stack F5)	0.09	0.06
DC-7 (Stack F7)	0.09	0.06
DC-8 (Stack F)	0.09	0.06
DC-9 (Stack F9)	0.09	0.06
DC-10 (Stack F10)	0.09	0.06
DC-11 (Stack F11)	0.09	0.06
DC-12 (Stack F12)	0.09	0.06
DC-13 (Stack F13)	0.09	0.06
DC-14 (Stack F14)	0.09	0.06
Coal Pile F17	0.09	0.06

Compliance with these emission limits and the implementation of the Fugitive Dust Control Plan shall limit the potential to emit from CP (45) 1895, issued on October 26, 1990, of PM to less than twenty-five (25) and PM10 to less than fifteen (15) tons per twelve (12) consecutive month period, each and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

[101] Renewal Permit at 133.
[102] *Id.* at 133-134.

Because these limits were established in existing air permits and are used to avoid SIP-approved PSD permitting requirements,[103] they are "applicable requirements" that must be addressed in the Renewal Permit.[104]

Condition D.22.7 establishes the following monitoring requirements to assure compliance at those units: [105]

D.22.7 Visible Emissions Notations [40 CFR 64]	
(a)	Visible emission notations of each baghouse stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
(b)	For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
(c)	In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
(d)	A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
(d)	If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.
The above monitoring condition is also required under Compliance Assurance Monitoring (CAM) for PM10 and PM2.5 for the following:	
(1)	Coal pulverization equipment train, identified as SS-1;
(2)	Coal pulverization equipment train, identified as SS-S; and
(3)	Coal pulverization equipment train, identified as SS-3.

The Renewal Permit is deficient because it does not provide adequate and enforceable monitoring to assure compliance with the numeric PM and PM_{10} emission limits for the twenty-two baghouses (twenty-eight stacks) and one coal pile contained in Condition D.22.2, and because the permit record does not provide a clear rationale for why IDEM believes the monitoring

[103] *See generally* EPA Approved Regulations and Statutes in the Indiana SIP, https://www.epa.gov/air-quality-implementation-plans/epa-approved-regulations-and-statutes-indiana-sip (listing multiple actions approving the PSD requirements of 326 IAC 2-2 into the Indiana SIP).
[104] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1) and (2)); *Pacific Coast Order* at 7.
[105] Renewal Permit at 135.

requirements currently in place are sufficient to determine compliance with these numeric emission limits.

2. Part 70 Requirements Not Met, Issue Raised in Public Comment

Title V permits must contain testing, monitoring, reporting, and recordkeeping requirements sufficient "to assure compliance with the permit terms and conditions,"[106] and "the rationale for the selected monitoring requirements must be clear and documented in the permit record."[107] The Renewal Permit fails to meet the requirements of Part 70 because it does not include monitoring requirements sufficient to assure continuous compliance with numeric PM and PM_{10} emission limits in Condition D.22.2. Moreover, the lack of clarity in the monitoring terms of Condition D.22.7 renders it and the underlying numeric PM and PM_{10} emission limits in Condition D.22.2 practically unenforceable.

EPA raised this issue in Comment 8 on the draft Renewal Permit, stating:[108]

[106] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).
[107] *CITGO Order* at 7-8.
[108] ATSD at 48-49. As explained in n.15, *supra*, because the ATSD copied the substantive text of the EPA comments provided in Ex. 3, we cite to the ATSD when discussing EPA's comments.

EPA Comment 8

Condition D.22.7 specifies daily visible emission notations as the compliance monitoring method for the baghouses for the coal pulverization system units subject to the PM and PM10 emission limits of condition D.22.2. In addition, the coal pulverization equipment trains identified as SS-1 through SS-3 are subject to Compliance Assurance Monitoring (CAM) under 40 CFR 64. Condition D.22.7 requires a trained employee to record whether emissions are "normal" or "abnormal". It is unclear whether this compliance monitoring approach, in this case, which expects employees to reliably assess the level of visible emissions in comparison to a potentially nonzero reference amount of visible emissions, is practicably enforceable and sufficient to provide reasonable assurance of complying with condition D.22.2 and an effective indicator of emission control performance under CAM.

EPA has noted that, in certain situations, monitoring for VE using certain Method 22-like observation techniques can be a useful and effective indicator of fabric filter performance, while acknowledging its lower sensitivity compared to other monitoring techniques. In EPA's Draft CAM Technical Guidance Document Appendix B, EPA provided a non-exhaustive list of monitoring approaches used in conjunction with fabric filters that may provide a reasonable assurance of compliance. It describes an example compliance assurance strategy that employs either daily Method 9 opacity readings, or daily VE observations by a trained observer using Method 22-like VE/no VE observation techniques (Approach No. 1a). The document highlights the appropriate use of the VE/no VE criterion for monitoring using this approach, stating "For situations where no visible emissions are the norm, a technique focused towards identifying a change in performance as indicated by *any visible emission* is a useful and effective technique." (emphasis added).

We request IDEM review the compliance determination approach for the baghouse-controlled coal pulverization system units, including SS-1 through SS-3, and update the permit, as needed. We recommend IDEM consider other monitoring approaches, such as requiring a reasonable response based on identifying a change in performance as indicated by *any visible emissions*, rather than "normal" or "abnormal"; daily pressure drop measurements; or bag leak detection systems.

This comment from EPA clearly notes issues with the practical enforceability of the terms "trained employee" and "normal or abnormal" in Condition D.22.7 and the lack of clarity on how this term will "reliably assess" compliance with the "permitted requirements," which are the numeric emission limits in Condition D.22.2.

3. Analysis of IDEM's Response

IDEM responded to EPA's comment as follows:[109]

IDEM Response to EPA Comment 8

IDEM finds that visible emission notations in Condition D.22.7 are an acceptable compliance monitoring requirement. Visible emission notations are a reasonable method for assuring each associated control device is working properly. However, IDEM has reviewed the existing monitoring requirements and agrees to include daily pressure drop readings for the coal pulverization equipment train since the control devices associated with these emission unit are connected to the source's pressure monitoring system. The permit is revised as follows:

[109] ATSD at 49.

IDEM then inserted a new permit term, Condition D.22.8, to add daily pressure drop readings for the coal pulverization equipment train baghouses (SS-1, SS-2, and SS-3), and Condition D.22.10 to require Gary Works to record the daily baghouse pressure drop readings. Newly added Condition D.22.8 provides:[110]

> D.22.8 Parametric Monitoring [40 CFR 64]
>
> The Permittee shall record the pressure drop across the coal pulverization equipment train (SS-1, SS-2, and SS-3) baghouses at least once per day when the associated pig iron caster is in operation. When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
>
> The instruments used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.
>
> The above monitoring condition is also required under Compliance Assurance Monitoring (CAM) for PM10 and PM2.5 for the following:
>
> (1) Coal pulverization equipment train, identified as SS-1;
> (2) Coal pulverization equipment train, identified as SS-S; and
> (3) Coal pulverization equipment train, identified as SS-3.

This response fails to address the specific issue raised by the EPA comment – the use of unenforceable terms such as "trained employee" and "normal or abnormal" and whether the specific provisions of Condition D.22.7 will reliably assess and assure compliance with Condition D.22.2, which contains numeric PM and PM_{10} emission limits. The addition of Condition D.22.8 likewise does little to assure compliance with Condition D.22.2 because Condition D.22.8 covers only three baghouses, while Condition D.22.2 contains numeric PM and PM_{10} emission limits for twenty-three different sources.

[110] ATSD at 49-50; Renewal Permit at 135. Petitioners note that the parametric monitoring IDEM "added" to the Renewal Permit in response to EPA's comment as Condition D.22.8 was a requirement in the underlying US Steel Gary Works Title V permit T089-29907-00121 dated December 20, 2013, at 215, Condition D.22.7. Petitioners were unable to find any explanation in the permit record as to why it was omitted from the draft Renewal Permit. *See* n. 122, *infra*.

Even with respect to the three baghouses covered by Condition D.22.8, the Renewal Permit fails to assure compliance with the PM limits in Condition D.22.2. As an initial matter, the applicable requirements – the PSD Requirements contained in 326 IAC 2-2 – do not contain specific monitoring provisions. Thus, the "Title V permit must include periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of compliance with the permit."[111]

The monitoring terms in Condition D.22.7 and D.22.8 are not sufficient to yield such reliable data to ensure compliance with the multiple numeric PM and PM_{10} emission limits imposed by Condition D.22.2.[112] "Normal or abnormal" are vague terms that do not have any clear connection to the applicable numeric emission limits. Likewise, it is not clear what type of training the "trained employee" will receive that would render him or her able to view exhaust from these twenty-eight baghouse stacks and one coal pile and determine whether it meets these numeric limits.

Condition D.22.7(d) notes that a "trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process,"[113] but IDEM failed to explain how such a process would result in the ability to estimate numeric PM and PM_{10} emissions, especially at levels as low as 0.06 pound per hour as required by Condition D.22.2.[114] Moreover, as noted in EPA's comment, such training and the resulting observations provide no assurance of compliance with PM and PM_{10}

[111] *Deer Park Order* at 18, citing 40 C.F.R. § 70.6(a)(3)(i)(B).
[112] Renewal Permit at 133 (specifying limits of 1.08 pound per hour PM, 0.63 pound per hour PM_{10} (for baghouses SS-1, SS-2, and SS-3); 0.09 pound per hour PM, 0.06 pound per hour PM_{10} (for baghouses Line A, Line B, Pulverized coal storage reservoir, DC-6, DC-1, DC-2, DC-3, DC-4, DC-5, DC-7, DC-8, DC-9, DC-10, DC-11, DC-12, DC-13, DC-14, and Coal Pile F17); and 0.36 pound per hour PM, 0.21 pound per hour PM_{10} (for baghouses RCD-1(8A) and RCD-1(8B)).
[113] Renewal Permit at 135.
[114] *See id.* at 133.

emission limits if the employees have been trained during a period where normal emissions would be "a potentially nonzero reference amount," i.e., where the condition of the Baghouses have been degrading and some unspecified amount of PM and /or PM_{10} emissions in the exhaust are thus "normal."[115]

In addition, the specific terms in Condition D.22.7 make the PM and PM_{10} emission limits of Condition D.22.2 practically unenforceable because they specifically limit the PM and PM_{10} compliance determination, and thus any finding of noncompliance, to a multi-step process that is based entirely on observations of a "trained employee." Not only is this "training" insufficient, as discussed above, but the compliance determination – and the monitoring required to determine compliance – cannot be limited to only the source's employees; the CAA requires that it be enforceable by IDEM, EPA, and the public.[116]

While IDEM responded that Condition D.22.7 and other requirements (such as parametric monitoring in Condition D.22.8 and bag detection) assure that the "associated control device" (i.e., baghouses for SS-1, SS-2, and SS-3) are working properly, such assertions do not explain how these methods can be used to determine continuous compliance with the specific PM and PM_{10} emission limits in Condition D.22.2. And the bag pressure drop readings are only required for three of the twenty-two baghouses – leaving nineteen baghouses without any parametric monitoring.

The Renewal Permit also fails to identify either visible emission notations or bag pressure drop readings as the method for determining compliance with the numerical limits in Condition D.22.2.[117] Petitioners could not identify any information in the Permit or elsewhere in the record that establishes how these conditions assure compliance with numeric PM and PM_{10} emission

[115] ATSD at 48-49.
[116] 42 U.S.C. § 7661c(a).
[117] Renewal Permit at 135, Conditions D.22.7 and D.22.8.

limits.[118] Moreover, it is not clear that IDEM could provide such an assessment, since pressure drop readings do not quantify PM or PM_{10} emissions. Pressure drop readings are an indicator of baghouse performance, are influenced by many factors (such as dust load, cleaning system performance, and air volume), and do not directly correlate with specific, numeric readings of PM or PM10 emissions.[119]

The other compliance provisions in Condition D.22.7 also fail to assure compliance with the hourly PM and PM_{10} emission limits. Condition D.22.7(c), for example, refers to "operation that would normally be expected to cause the greatest emissions" and Condition D.22.7(d) directs U.S. Steel to take "a reasonable response" if "abnormal conditions" occur. Such vague terms render these Conditions unenforceable. Condition D.22.7(d) also states that "Section C – Response to Excursions and Exceedances contain the Permittee's obligation with regard to the reasonable response steps required by this condition." But provision is equally unenforceable as it merely requires the permittee to restore operation of the emissions unit "as expeditiously as practicable."[120] Nowhere in the Renewal Permit or the accompanying record does IDEM define these vague terms or specify how such opacity readings would correlate with specific numeric PM and PM_{10} amounts. Accordingly, they are insufficient to assure compliance with the PM limits and unenforceable by IDEM, EPA, and the public. [121]

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[118] *See, e.g.,* TSD at 56 (noting the numerical PM and PM_{10} emission limits that apply but without any discussion of terms intended to assure compliance with them); *see also* ATSD *generally* (no discussion of determining compliance with PM and PM_{10} emission limits in Condition D.22.2 aside from EPA Comment 8 and IDEM's response, which is deficient for the reasons discussed above).

[119] *See* FabCo Industrial Services, *Baghouse Differential Pressure: What You Should Know* (Sept. 10, 2024), https://www.fabcoind.com/baghouse-differential-pressure-what-you-should-know*; see also, generally,* EPA, Section 6: Particulate Matter Controls (EPA/452/B-02-001) (Dec. 1998), *https://www3.epa.gov/ttncatc1/cica/files/cs6ch1.pdf* (setting forth the very complex analysis required to determine PM control from baghouses, including the computation of and impact of pressure drop).

[120] Renewal Permit at 49, Condition C.16.

[121] *See* discussion in Section B.3, *supra*, and related citations to *Hu Honua Order* at 10, *Pencor-Masada Order* at 7, and *Montgomery County Order* at 9-11.

IDEM also cites CP (45) 1895 and T089-29907-00121 as authority for the PM and PM_{10} limits in D.22.2, but the Renewal Permit fails to include specific monitoring provisions contained in T089-22907-00121. Specifically, the Renewal Permit omits stack testing compliance requirements for the emission units – which require testing of *all* baghouse stacks – not just those connected to baghouses SS-1, SS-2, and SS-3.[122]

This overall failure to assure compliance with the numerous PM and PM_{10} emission limits in Condition D.22.2 is particularly problematic because the limits in that Condition appear to be included to avoid the more stringent control and other requirements of the PSD rules in the Indiana SIP.[123] Such "synthetic minor" limits are used to maintain emissions below certain thresholds to avoid requirements applicable to major emission sources under CAA permitting programs (such as PSD and nonattainment permitting). For that reason, synthetic minor permit limits "must include sufficient terms and conditions such that the source cannot lawfully exceed the limit."[124] Such limits must also be supported by testing, monitoring, recordkeeping, and reporting requirements that are "sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action."[125] As explained above, the Renewal Permit fails those tests.

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[122] *See* US Steel Gary Works Permit T089-29907-00121 (Dec. 20, 2013), https://permits.air.idem.in.gov/29907f.pdf , at 216, Condition D.23.3, and at 221-22, Condition D.25.3. It is unclear why IDEM removed these testing provisions from the permit prior to previous permit renewals. Petitioners note that the testing requirements for all of the baghouses connected to the coal pulverization system were also omitted from US Steel Gary Works Title V Renewal Permit T089-39777-00121 (May 16, 2019). Agreed Order 2017-24764-A, issued on April 20, 2021, mandated stacking testing requirements for baghouses SS-1, SS-2, and SS-3 to be reinstated in the permit. *See* Renewal Permit at 214, Condition D.22.4. Petitioners were unable to find any explanation in the permit record as to why the monitoring and testing provisions from underlying permit T089-29907-00121 were omitted from Renewal Permit T089-39777-00121 or the current Renewal Permit.

[123] Renewal Permit at 143 (noting that compliance with the PM and PM_{10} emission limits, as well as other actions, "shall render the requirements 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable").

[124] *In the Matter of Yuhuang Chemical, Inc.* (Aug. 31, 2016), https://www.epa.gov/sites/default/files/2016-09/documents/yuhuang_response2015_0.pdf, at 14.

[125] *Pencor-Masada Order* at 7.

In short, IDEM's response does not address the issues of enforceability and compliance assurance raised in the public comments, and Conditions D.22.7 and D.22.8 are insufficient to assure compliance with the applicable requirements for numeric PM and PM_{10} emission limits contained in Condition D.22.2. Accordingly, EPA must grant this Petition on this issue and direct IDEM to revise the Renewal Permit to include supplemental monitoring to assure compliance with the hourly, numeric PM and PM_{10} emission limits contained in Condition D.22.2, or, at a minimum, require IDEM to explain fully how the current permit provisions assure compliance with those numeric PM emission limits.

E. The Renewal Permit fails to include any compliance monitoring, recordkeeping, and reporting requirements to assure compliance with the PM limits at Slag Granulation Process for the Blast Furnaces.

1. Specific Grounds for Objection, Including Citation to Permit Terms

Condition D.7.4 of the Renewal Permit addresses the Lake County PM_{10} Emission Requirements of 326 IAC 6.8-1-2(a), which are county-specific PM requirements for coating operations, such as the BOP Shop at Gary Works, that are contained in the Indiana SIP.[126] These are "applicable requirements" that must be addressed in a Title V permit.[127] Specifically, Condition D.7.4 establishes numeric PM_{10} emission limits for the slag granulation process quenching hooded exhaust stack as follows:[128]

D.7.4	Particulate Emission Limitation [326 IAC 6.8-1-2(a)]
	Pursuant to CP 089-1953-00133, issued on March 18, 1991, and 326 IAC 6.8-1-2(a) (Particulate Matter Limitations for Lake County), particulate matter emissions from the slag granulation process quenching hooded exhaust stack shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

[126] Renewal Permit at 74; 79 Fed. Reg. 34435 (June 17, 2014) (SIP Approval).
[127] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1)); *Pacific Coast Order* at 7.
[128] Renewal Permit at 74.

Conditions D.7.9 through D.7.15 contain the Compliance Determination Requirements for the various emission limits and standards for blast furnace operations, i.e., the limits in Section D, but there are no Compliance Determination Requirements that specifically reference or are used to assure compliance with Condition D.7.4.[129] Thus, the Renewal Permit is deficient because it does not provide adequate and enforceable monitoring, recordkeeping, and reporting requirements to assure compliance with applicable Lake County PM limits contained in Condition D.7.4.

2. Part 70 Requirements Not Met, Issue Raised in Public Comment

The Renewal Permit must contain testing, monitoring, reporting, and recordkeeping requirements sufficient "to assure compliance with the permit terms and conditions,"[130] and IDEM's "rationale for the selected monitoring requirements must be clear and documented in the permit record."[131] The Gary Works Renewal Permit fails to meet the requirements of Part 70 because it does not contain *any* provisions to assure compliance with Condition D.7.4, and IDEM does not provide a sufficient rationale for the exclusion of these provisions.

Petitioners raised this issue in Comment #31 on the draft Renewal Permit, stating:[132]

> Condition D.7.4: Lake County PM for slag granulation process: IDEM has failed to provide rationale or a reasoned explanation for why there are no monitoring requirements to assure compliance with the pound per hour limit. The Condition cites to 326 Indiana Admin. Code 2-2, which includes 16 subsections relevant to PSD. However, IDEM fails to indicate which section applies. Therefore, IDEM must include in the Final Permit a condition with adequate monitoring to assure compliance with the limits in D.7.4, taking care to be more specific in its reference to authority.

[129] *See generally id.* at 74-79 (no citation to Condition D.7.4 in Conditions D.7.9 through D.7.15) .
[130] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).
[131] *CITGO Order* at 7-8.
[132] Appendix A at 41. As explained in n.14, *supra*, because Appendix A to the ATSD copied the substantive text of Petitioners' comments provided in Ex. 2, we cite to the Appendix A when discussing Petitioners' comments.

The public comment clearly noted the failure to provide any monitoring requirements to assure compliance with the Lake County PM_{10} emission limit in Condition D.7.4, which is an applicable requirement, and the failure of IDEM to provide a rationale for that exclusion.

3. Analysis of IDEM's Response

IDEM responded to Petitioner's comment by stating:[133]

> The commenter incorrectly states that the PM limit in Condition D.7.4 cites to 326 IAC 2-2 (PSD). As indicated in the draft Part 70 Operating Permit Renewal this limit is pursuant to 326 IAC 6.8-1-2(a). Based on calculations in CP 089-1953-00133, issued on March 18, 1991, the PM emission rate from the slag granulation process is 0.06 grams per dry standard cubic meter. This was derived from stack test data on a similar facility in Canada.
>
> The slag granulation process is not equipped with an add on PM control device. However, the high water and low silt content of the granules help reduce PM emissions (10% moisture). The overall PM and PM10 emissions from the granulation process are 57.42 and 30.0 tons per year, respectively. However, the majority of these potential emissions come from wind erosion from the stockpile operations, 43.36 tons of PM and 20.70 tons of PM10 per year, respectively. As a result, pursuant to Condition D.7.12, U.S. Steel is required to use dust suppression to control the fugitive particulate emissions from the granulation plant. CP 089-1983-00133, required the source to conduct uncontrolled PM stack testing on the slag granulation plant stack exhaust within 60 days after achieving maximum production rate but no later than 180 days after initial start-up. The source conducted the uncontrolled PM testing and was determined to be in compliance with the PM emission limitation in 326 IAC 6.8-1-2(a).
>
> Based on IDEM's compliance monitoring guidance, the hot slag quenching operation, silos, belt conveyers, storage silo and loadout bay do not require any compliance monitoring to demonstrate compliance with Condition D.7.4. No changes to the draft permit were made as a result of this comment.

This response is inadequate to address the concerns raised in Petitioners comments – the failure to have any specific compliance monitoring (with associated recordkeeping and reporting) to assure compliance with the numeric PM emission limits in Condition D.7.4.

First, IDEM discusses the lack of a PM control device at the slag granulation process, the predominance of PM from wind erosion dust, and resulting dust suppression control in Condition D.7.12. However, Condition D.7.12 is intended to control "fugitive dust" and does not indicate

[133] Appendix A at 42.

that it should be used to determine compliance with Condition D.7.4.[134] Moreover, it is not clear, and IDEM does not explain, how use of the unspecified "dust suppression" controls in Condition D.7.12 can assure compliance with the specific numeric PM emission limits contained in the SIP-approved rules in 326 IAC 6.8-1-2(a).[135] Accordingly, IDEM's reliance on Condition D.7.12 is insufficient to assure compliance with Condition D.7.4.

Next, IDEM discusses "uncontrolled PM stack testing on the slag granulation plant stack exhaust" that was conducted following the issuance of CP [Construction Permit] 089-1983-00133, and notes that the source "was determined to be in compliance with the PM emission limitation in 326 IAC 6.8-1-2(a)."[136] Condition D.7.4 explains that CP 089-1983-00133 was issued in March 18, 1991, which means the performance testing referenced by IDEM was carried out more than 30 years ago.[137] Even if such a test was sufficient to determine compliance with the numeric PM emission limits contained in Condition D.7.4 at that time, such one-time testing is insufficient to fulfill the requirement that Title V permits contain periodic monitoring to show these emissions *continue* to be in compliance with these numeric limits.[138]

EPA has explained that even if the original applicable requirement contained compliance monitoring (such as the initial stack test contained in CP 089-1983-00133), the Title V permit must include supplemental monitoring to assure compliance if the periodic monitoring is insufficient to assure compliance with permit terms and conditions.[139] Petitioners' comments raise exactly the type of situation in which such supplemental monitoring provisions are needed, since the

[134] Renewal Permit at 77.
[135] Compare *id*., Condition D.7.12, to 326 IAC 6.8-1-2(a) (specifying PM emission limits of "seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)").
[136] ATSD at 42.
[137] Renewal Permit at 74.
[138] 40 C.F.R. § 70.6(a)(3)(B).
[139] *Deer Park Order* at 18.

construction permit required only one-time monitoring. IDEM does not, and cannot, justify using a stack testing completed more than 30 years ago to fulfill the requirement that the Renewal Permit include "*periodic* monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance" with the requirements the numeric emission limits of 326 IAC 6.8-1-2(a).[140] In addition, the stack testing conducted in the early 1990's following issuance of CP 089-1983-00133 is evidence that such periodic monitoring and testing can be done on the slag granulation process quenching hooded exhaust stack, and the Renewal Permit should require such monitoring to be done periodically. Accordingly, IDEM's reliance on 30-year-old testing is insufficient to assure compliance with Condition D.7.4 in this Renewal Permit.

Finally, IDEM relies on its "compliance monitoring guidance" to state that "the hot slag quenching operation, silos, belt conveyers, storage silo and loadout bay do not require any compliance monitoring to demonstrate compliance with Condition D.7.4."[141] But IDEM did not provide a copy of or citation to this guidance document, let alone explain how any of its provisions apply to the numeric PM emission limits contained in Condition D.7.4. This is exactly the type of blanket assertion that is insufficient under EPA's Part 70 regulations, which require the permitting authority to "set[] forth the legal *and* factual basis" for its permitting decisions, "including references to the applicable statutory or regulatory provisions."[142] Any such compliance monitoring "guidance" by its nature is non-binding, and thus not a legal basis or applicable statutory or regulatory provisions as required by 40 C.F.R.§ 70.47(a)(5). Moreover, the only potentially applicable guidance located by Petitioners appears to address the compliance assurance

[140] 40 C.F.R. § 70.6(a)(3)(B). *See also Citgo Order* at 5-6 (finding a Title V permit failed to include sufficient monitoring where the permitting authority provided "no indication in the permit record that [it] evaluated whether the frequency and timing requirements of the monitoring [the applicable requirement] are sufficient to assure compliance with the terms and conditions in the permit" as required by the Clean Air Act).
[141] ATSD at 42.
[142] 40 C.F.R. § 70.7(a)(5) (emphasis added).

monitoring requirements of 40 C.F.R. Part 64, not the Title V requirements of Part 70.[143] Without more explanation by IDEM, it is not clear how the Department also relied on this Part 64 guidance to avoid the specific requirements of the CAA and 40 C.F.R part 70, including the requirement that Title V permits include adequate monitoring, testing, recordkeeping, and reporting to assure compliance with the applicable requirements in the permit.[144] This is especially relevant for Condition D.7.4, which does not appear to be addressed by a compliance assurance monitoring plan.[145]

As discussed above, the Renewal Permit fails to contain any monitoring, testing, recordkeeping, or reporting requirements to assure compliance with the specific numeric PM emission limits of 326 IAC 6.8-1-2(a) contained in Condition D.7.4, and IDEM has failed to provide a clear rationale for that exclusion. EPA previously granted a Title V petition finding inadequate monitoring to support compliance with applicable requirements where the permitting authority "did not articulate a rationale for its conclusions that the monitoring requirements…are sufficient to assure compliance with the emissions limitations."[146]

Accordingly, EPA must grant Petitioners' request for an objection on this issue and direct IDEM either to revise the Renewal Permit to include supplemental monitoring to assure compliance with the numeric PM emission limits contained in Condition D.7.4 or to fully explain its rationale for excluding such conditions in the Permit, including a factual and legal basis for that decision that aligns with the relevant Title V statutory and regulatory requirements.

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[143] IDEM, Compliance and Enforcement Branch, Technical Guidance Document: Compliance Monitoring Guidance (January 2011), https://www.in.gov/idem/airpermit/files/assistance_compliance_monitoring_guidance.zip, at
[144] 42 U.S.C. § 7661c(c) and 40 C.F.R. § 70.6(c)(1).
[145] *Compare* Renewal Permit at 74, Condition D.7.4, *with id.* at 135, Conditions D.22.7. and D. 22.8 (specifically noting that the relevant monitoring condition "is also required under Compliance Assurance Monitoring").
[146] *Citgo Order* at 8.

F. The Renewal Permit fails to include the required Continuous Compliance Plan, Corrective Action Plan, and NESHAP Operation and Maintenance Plans.

1. Specific Grounds for Objection, Including Citation to Permit Terms

The Renewal Permit fails to include the Continuous Compliance Plan, the Corrective Action Plan, and the operation and maintenance plans required under the National Emission Standards for Hazardous Air Pollutants ("NESHAP") rules applicable to the Facility (collectively, "Plans"). The inclusion of these Plans and the underlying requirements therein constitute applicable requirements under the Part 70 rules. In addition, the Continuous Compliance Plan and the NESHAP Subpart FFFFF operation and maintenance plan are necessary to assure compliance with other applicable requirements in the Permit.

The Renewal Permit contains visible emissions monitoring provisions in Conditions D.6.8(f), D.6.9(e), D.7.13(f), D.7.14(c), D.8.8(f), D.8.9(d), D.9.10(f), and D.9.11(d) that require Gary Works to comply with the Continuous Compliance Plan ("CCP") as follows:[147]

> The Permittee shall comply with the most current Continuous Compliance Plan visible emission evaluation program. Section C - Continuous Compliance Plan contains the Permittee's obligation with regard to the visible emission evaluation program required by this condition.

Condition C.12(a) of the Permit also requires that Gary Works "perform the inspections, monitoring and record keeping in accordance with…applicable procedures in the CCP."[148] 326 IAC 6.8-8-1 required Gary Works to submit a facility-specific CCP by December 10, 1993 containing the "process operating parameters critical to continuous compliance with the applicable PM_{10}" limits of the rule and associated monitoring, recording, and record keeping procedures, as well as procedures to maintain adequate exhaust ventilation.[149] The CCP is part of the compliance

[147] Renewal Permit at 67, 68, 78, 79, 84, 85, 92.
[148] Renewal Permit at 48
[149] 326 IAC 6.8-8-1(17) and 6.8-8-3(3)-(6).

requirements in the Lake County PM_{10} Emission Requirements of 326 IAC 6.8 contained in the Indiana SIP, and thus the CPP is an applicable requirement of the Renewal Permit.[150]

Condition D.6.11(d) of the Renewal Permit requires that Gary Works implement its corrective action plan ("CAP") as follows:[151]

> D.6.11 Continuous Emissions Monitoring (VOC)[326 IAC 8-13-8][326 IAC 3-5]
>
> The Permittee shall operate the continuous emissions monitoring system (CEMS) for the measurement of VOC emissions discharged into the atmosphere from the Windbox gas cleaning system stacks IS6198 and IS6199, in accordance with 326 IAC 8-13-8, and 326 IAC 3-5.
>
> ...
>
> (d) In the event of an exceedance of VOC emissions, the Permittee shall implement the corrective action plan requirements in 326 IAC 8-13-4(b)(5).

Condition D.6.14(b)(1)(v) also requires the Permittee to report actions taken in accordance with the CAP.[152] 326 IAC 8-13-4(b)(5) required the Permittee to submit the CAP for the Gary Works sinter plant (now known as the "Recycling Center") by November 1, 1998, and required the CAP to include "control measures, such as, but not limited to, reducing sinter production, changing sinter burden characteristics, or modifying sintering process equipment operations" that must be implemented in the event of a VOC exceedance.[153] The CAP is part of the compliance requirements in the SIP-approved VOC control rules of 326 IAC 8, and thus the CAP is an applicable requirement for Gary Works.[154]

Multiple provisions of the Renewal Permit require Gary Work to comply with operation and maintenance plans ("O&M Plans") required by the federal NESHAPs, which have also been incorporated into state law. Specifically:

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[150] 71 Fed. Reg. 14383 (March 22, 2006) and 73 Fed. Reg. 23356 (April 30, 2008) (SIP approvals); 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1)).
[151] Renewal Permit at 68.
[152] Renewal Permit at 70.
[153] 326 IAC 8-13-4(b)(5).
[154] 65 Fed. Reg. 41350 (July 5, 2000) (SIP Approval); 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1)).

- Conditions F.9.2(a)(9) and (21) incorporate the NESHAP Subpart FFFFF requirements at 40 C.F.R. §§ 63.7800 and 63.7833,[155] which require Gary Works to "prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device" subject to a Subpart FFFFF emission limits and to demonstrate compliance with those emission limits by operating "the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan;"[156] and
- Condition F.10.2(6) incorporates the NESHAP Subpart CCC requirements at 40 C.F.R. § 63.1160(b),[157] and it requires Gary Works to prepare and implement "an operation and maintenance plan for each emission control device" by no later than June 22, 2001" and specifies that "[t]he plan shall be incorporated by reference into the source's title V permit."[158]

These O&M plans are requirements of the federal NESHAP rules promulgated under Clean Air Act section 112, and the Subpart FFFFF O&M plan is used to demonstrate compliance with the NESHAP emission limits. The O&M Plans are thus applicable requirements for Gary Works.[159]

The Renewal Permit is deficient because the CCP, CAP, and the Subpart CCC and FFFFF O&M Plans are not included in the Permit, as required by the CAA and relevant Part 70 rules. In addition, as explained below, the CCP and the Subpart FFFFF O&M Plan are necessary to assure compliance with other applicable requirements and must be included in the Permit to ensure it contains adequate and enforceable monitoring requirements.

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[155] Renewal Permit at 185.
[156] 40 C.F.R. §§ 63.7800(b), 63.7833(b)(1); *see also* Renewal Permit, Attachment J at 12, 36 (incorporating these requirements verbatim).
[157] Renewal Permit at 184.
[158] 40 C.F.R. § 63.1160(b) (incorporating the existing source compliance date in 63.1160(a)(1)); *see also* Renewal Permit, Attachment K at 4-5 (incorporating this requirement verbatim).
[159] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (4)) and 40 C.F.R. §§ 70.6(c)(3).

2. Part 70 Requirements Not Met, Issue Raised in Public Comment

The Renewal Permit must contain the requirements applicable to Gary Works, including requirements of the Indiana SIP.[160] The Permit must also contain monitoring provisions included in applicable requirements, as well as monitoring requirements sufficient "to assure compliance with the permit terms and conditions."[161] All required Title V permit terms must be enforceable,[162] and "the rationale for the selected monitoring requirements must be clear and documented in the permit record."[163] The Renewal Permit fails to meet the requirements of Part 70 because it fails to include the CCP, CAP, and the Subpart CCC and FFFFF O&M Plans as required by the Indiana SIP and the Part 70 rules, and the CCP as necessary to assure compliance with applicable emission limits.

Petitioners clearly raised the failure to include the CCP, CAP, and the O&M Plans in the Renewal Permit in public comment, stating:

> The Draft Permit and TSD repeatedly refer to various plans that USS is required to implement at Gary Works. EPA has found that plans to which a facility is subject to be operated should be properly incorporated by reference in the Title V permit. …Therefore, IDEM must require USS to…include the Continuous Compliance Plan, Corrective Action Plan, Operation and Maintenance Plan [and other plans] in the final permit package.[164]

Petitioners explained that "certain plans to which a facility is subject should be properly incorporated by reference into the Title V permit" and argued that the CCP, CAP, and O&M Plans were such requirements for Gary Works.[165] Petitioners elaborated on the specific requirements of the CCP, the CAP, and the O&M Plans required by Subparts FFFFF and CCC,

[160] 42 U.S.C. § 7661c(a).
[161] 40 C.F.R. §§ 70.6(c)(1) and (3); 42 U.S.C. § 7661c(c).
[162] *See, e.g.*, *Hu Honua Order* at 10.
[163] *CITGO Order* at 7-8.
[164] Appendix A at 48. As explained in n.14, *supra*, because Appendix A to the ATSD copied the substantive text of Petitioners' comments provided in Ex. 2, we cite to the Appendix A when discussing Petitioners' comments.
[165] *Id.* at 49.

and explained that because specific units at Gary Works were required to operate in accordance with the Plans, they "must be included in the Final Permit."[166] Petitioners also emphasized that for the Plans "to be practically enforceable, the Final Permit must attach and incorporate [them]."

3. Analysis of IDEM's Response

IDEM responded to Petitioners' comment as follows:[167]

> **IDEM Response to EIP and ELPC Comments 35 and 36:**
>
> The commenter asserts that IDEM has failed to assure that U.S. Steel complies with several plans that they must implement, but provides no evidence to support this accusation.
>
> IDEM disagrees with the commenters' characterization of the extent to which CAA regulations "require" that the specified plans cited by the commenters be incorporated into a Part 70 Permit. Neither 40 CFR 70.5 (Permit applications) nor 40 CFR 70.6 (Permit content) name any of the specified plans cited by the commenters. Whether one or more of the specified plans cited by the commenters is "Other specific information that may be necessary to implement and enforce other applicable requirements of the Act or of this part or to determine the applicability of such requirements" [40 CFR 70.5(c)(5)] is plainly at the discretion of the permitting authority.
>
> The specified plans cited by the commenters are kept on site so that on-site employees can effectively implement the plans and so that a copy is available for review by an IDEM, OAQ inspector. During an inspection, the IDEM, OAQ inspector will perform a records review, which includes review of the specified plans cited by the commenters, to determine if the source is in compliance with the applicable requirements. These plans are typically living documents and may change from time to time based the source's current operations, procedures, needs, etc. If a source is not in compliance with any applicable permit requirements, the source may be referred to compliance and enforcement.

With regard to the O&M Plans, IDEM also stated:[168]

[166] Appendix A at 52-54.
[167] *Id.* at 49-50. *See also id.* at 54 (incorporating the response to Comments 35 and 36 and other responses not relevant to this Petition, the Sulfur Sampling and Analysis Plan in Response 24 and the CAM Plan in Response 37).
[168] *Id.* at 50.

Operation and Maintenance Plan

The below table summarizes the permit conditions and permit attachments that incorporate any applicable operation and maintenance plan requirements for these federal rules.

Permit Condition	Federal Rule and Title	Federal Rule Permit Attachment
F.9.2	40 CFR Part 63, Subpart FFFFF, NESHAP for Integrated Iron and Steel Manufacturing Facilities	Attachment J
F.10.2	40 CFR Part 63, Subpart CCC, NESHAP Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants	Attachment K
F.14.3	40 CFR Part 63, Subpart DDDDD, NESHAP for Industrial for Institutional, Commercial, and Industrial Boilers and Process Heaters	Attachment O
F.15.2	40 CFR Part 63, Subpart GGGGG, NESHAP for Site Remediation	Attachment R

IDEM's response is incorrect and inadequate regarding these Plans. As explained below, the CCP, CAP, and O&M Plans must be included in the Renewal Permit under numerous statutory and regulatory requirements.

First, Gary Works is required to have the CCP and CAP under SIP-approved Indiana regulations.[169] Thus, the CCP and CAP are applicable requirements of the Renewal Permit because they are "requirements provided for in the applicable implementation plan."[170] In developing those SIP rules, Indiana determined that a facility-specific CCP was necessary to comply with the Lake County PM_{10} Emission Requirements of 326 IAC 6.8 and that a facility-specific CAP was necessary to address exceedances of the VOC requirements in 326 IAC 8.[171] Moreover, because the Indiana SIP requires Gary Works to have and apply these Plans, IDEM must include these Plans in the Renewal Permit under 40 C.F.R. § 70.6, which specifically requires Title V permits to contain "[a]ll monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements."[172]

[169] 71 Fed. Reg. 14383 (March 22, 2006) and 73 Fed. Reg. 23356 (April 30, 2008) (SIP approvals requiring a CCP), and 65 Fed. Reg. 41350 (July 5, 2000) (SIP Approval requiring a CAP).
[170] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (1)).
[171] *See* 326 IAC 6.8-8-1(17) and 326 IAC 8-13-4(b)(5).
[172] 40 C.F.R. § 70.6(a)(3)(i)(A).

Likewise, the O&M Plans are required under the federal NESHAP program. Thus, they are applicable requirements of the Renewal Permit because they are a "requirement under section 112 of the Act."[173] In developing those rules, EPA specifically determined that development and implementation of an O&M plan was necessary to assure compliance with the rules' requirements.[174] EPA also specifically directed that the source-specific Subpart CCC O&M plan be included in the source's Title V permit.[175] IDEM's response notes that Attachments J and K "incorporate any applicable operation and maintenance plan requirements for these federal rules."[176] However, simply copying specific provisions of Subparts FFFFF and CCC that require U.S. Steel to develop and implement the O&M Plans, as IDEM has done here,[177] does not fulfill the Title V requirement to include the applicable requirements – i.e., the actual source-specific O&M plans that must be implemented at Gary Works – in the Renewal Permit.

Contrary to IDEM's response to comments, the Department has no "discretion" to determine that these Plans are not applicable requirements at Gary Works. In fact, EPA already addressed this issue, noting that permitting authorities must ensure that monitoring and other compliance requirements "contained in applicable requirements are properly incorporated into the [T]itle 5 permit" under 40 C.F.R. § 70.6(a)(3)(i)(A).[178] The Renewal Permit must be revised to include the Gary Works CCP, CAP, and O&M Plans in order to comply with the CAA and the Part 70 rules.

Second, IDEM must include these specific Plans in the Renewal Permit because that Permit requires Gary Works to comply with them. As EPA found in the *Oak Creek* Title V Order, when

[173] 40 C.F.R. § 70.2 (definition at "applicable requirement" at (4)).
[174] 40 C.F.R. §§ 63.7800(b), 63.7833(b)(1), and 63.1160(b).
[175] *Id.* at § 63.1160(b).
[176] Appendix A at 50.
[177] Renewal Permit at 185 and Attachment J at 12, 36 (incorporating 40 C.F.R. §§ 63.7800(b) and 63.7833(b)(1) verbatim); *id* at 184 and Attachment K at 4-5 (incorporating 40 C.F.R. § 63.1160(b) verbatim).
[178] *Deer Park Order* at 18 (citing 40 C.F.R. § 70.6(a)(3)(i)(A, B), (c)(1)).

"compliance with the approved [plan] is required" by the specific terms of a permit, "the plan must be included in the permit" under 40 C.F.R. § 70.6(a)(1).[179] That is exactly the case here. As noted above, the visible emissions monitoring provisions contained in Conditions D.6.8(f), D.6.9(e), D.7.13(f), D. 7.14(c), D.8.8(f), D.8.9(d), D.9.10(f), and D.9.11(d) require Gary Works to comply with the CPP, and Condition C.12(a) requires the Permittee to perform inspections, monitoring, and recordkeeping in accordance with that Plan.[180] Likewise, Condition D.6.11 requires Gary Works to "implement the corrective action plan" in the event of a VOC emissions exceedance.[181] Similarly, the specific NESHAP provisions incorporated at Conditions F.9.2(a)(9) and (21) and F.10.2(6) require the Gary Works develop and implement the O&M plans.[182] Accordingly, the CPP, CAP, and O&M Plans are requirements applicable to Gary Works that must be included in the Permit under the Part 70 rules.

Third, as noted by Petitioners, these Plans must be included in the Permit to make the provisions requiring compliance and implementation of the Plans enforceable against Gary Works. Title V requires enforceable permit terms,[183] and IDEM completely fails to address this enforceability issue in the record.[184] Without including the specific requirements of these Plans in the Permit, Conditions C.12, D.6.8(f), D.6.9(e), D.7.13(f), D.7.14(c), D.8.8(f), D.8.9(d), D.9.10(f), and D.9.11(d) (for the CCP), Condition D.6.11 (for the CAP), and Conditions F.9.2(a)(9), F.9.2(a)(21), and F.10.2(6) (for the O&M Plans) are unenforceable, because it is impossible for

[179] *In the Matter of WE Energies Oak Creek Power Plant, Permit No. 241007690-P-10* (June 12, 2009), https://www.epa.gov/sites/default/files/2015-08/documents/oak_creek_decision2007.pdf ("*Oak Creek Order*"), at 26. *See also In the Matter of Columbia University*, Pet. NO. II-2000-08 (Dec. 16, 2002), https://www.epa.gov/sites/default/files/2015-08/documents/columbia_university_decision2000.pdf ("*Columbia University Order*"), at 27 (noting where a facility is subject to a plan, the permit must "properly incorporate that plan").
[180] Renewal Permit at 67, 68, 78, 79, 84, 85, 92, and 48, respectively.
[181] *Id.* at 68.
[182] 40 C.F.R. §§ 63.7800(b), 63.7833(b)(1), and 63.1160(b).
[183] 42 U.S.C. § 7661c(a).
[184] Appendix A at 49-50 and 54.

IDEM, EPA, and citizens to determine whether Gary Works is complying with the requirements of the Plans, and, if not, to take appropriate enforcement action.[185]

Finally, the CCP and Subpart FFFFF O&M must also be included in the Permit because they are necessary to determine compliance with other applicable requirements. Compliance with the CCP provisions is part of the "Compliance Monitoring Requirements" of Section D.[186] The Permit states that compliance with the Plan would help determine Gary Works' compliance with specific Lake County PM_{10} Emission Requirements contained in Section D (i.e., Conditions D.6.2, D.7.5, D.8.1, and D.9.1). Likewise, the underlying NESHAP requirement of Condition F.9.2(a)(21) states that compliance with the Subpart FFFFF emission limits will be demonstrated by operating "the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan."[187] Thus, under 40 C.F.R. § 70.6(a)(3)(i)(B), the CCP and the Subpart FFFFF O&M plan are required monitoring provisions necessary to assure compliance with the Lake County and Subpart FFFFF emission requirements.[188]

While IDEM emphasizes the "living" nature of the Plans and its ability to inspect them, neither of those facts override the statutory and regulatory requirements (and related EPA orders) stating that they are the types of plans that must be included in Title V permits, as discussed above.[189] Accordingly, EPA must grant Petitioners' request for an objection on this issue and direct IDEM either to revise the Renewal Permit to include the Continuous Compliance Plan and the

[185] *Pencor-Masada Order*, at 7.
[186] Renewal Permit at 67, 68, 78, 79, 84, 85, 92, at Conditions D.6.8(f), D.6.9(e), D.7.13(f), D. 7.14(c), D.8.8(f), D.8.9(d), D.9.10(f), and D.9.11(d), respectively.
[187] Renewal Permit at 185; 63.7833(b)(1), also incorporated at Renewal Permit, Attachment J at 36.
[188] 40 C.F.R. § 70.6(a)(3)(i)(B).
[189] *See generally* 42 U.S.C. §§ 7661c(a)-(c); 40 C.F.R. §§ 70.6(a)(1), (3)(i)(A) and (B); *Oak Creek Order* at 26; *Columbia University Order* at 27.

Corrective Action Plan, or to provide the factual and legal basis for excluding the Plans from the Renewal Permit that aligns with the relevant Title V statutory and regulatory requirements.

V. Conclusion

For the reasons discussed above, EPA must object to the Gary Works Renewal Permit. As clearly raised in public comments, the Renewal Permit fails to include adequate testing, monitoring, recordkeeping, and reporting requirements sufficient to assure continuous compliance with multiple requirements applicable to emission units located at the Facility and also fails to include required compliance, corrective action, and operation and maintenance plans.

Accordingly, Petitioners respectfully request that EPA object to the issuance of the Renewal Permit and require IDEM to:

(1) Revise the Renewal Permit to include supplemental monitoring to assure compliance with the hourly and grains per dry standard cubic foot numeric PM emission limits contained in Conditions D.6.2, D.7.2, D.8.1, and D.9.1;

(2) Revise the Renewal Permit to include supplemental monitoring to assure compliance with the opacity limits contained in Conditions D.8.1 and D.9.1;

(3) Revise the Renewal Permit to include supplemental monitoring to assure compliance with the hourly, numeric PM and PM_{10} emission limits contained in Condition D.22.2;

(4) Revise the Renewal Permit to include supplemental monitoring to assure compliance with the numeric PM emission limits contained in Condition D.7.4;

(5) Revise the Renewal Permit to include the contents of the Continuous Compliance Plan, Corrective Action Plan, and the NESHAP Subpart FFFFF and CCC operation and maintenance plans; and

(6) Provide detailed rationales in the Renewal Permit Record regarding the adequacy of the selected monitoring requirement to assure compliance with the applicable requirements above, as well as fully explain the inclusion or exclusion of the required plans.

DATED: July 3, 2025

Respectfully submitted,

/s/ Robert Michaels

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