UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

IN THE MATTER OF	)	PETITION FOR OBJECTION
	)	
Clean Air Act Title V Permit (Federal Operating Permit) No. 0051-OP23	)	
	)	
Issued to United States Steel Corporation	)	Permit No. 0051-OP23
	)	
Issued by the Allegheny County Health Department	)	

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO THE ISSUANCE OF TITLE V RENEWAL OPERATING PERMIT NO. 0051-OP23 FOR THE U.S. STEEL MON VALLEY WORKS EDGAR THOMSON PLANT

I. INTRODUCTION

Pursuant to section 505(b)(2) of the Clean Air Act, 42 U.S.C. §7661(b)(2), and 40 C.F.R. §70.8(b), Environmental Integrity Project ("EIP"), Clean Air Council ("CAC"), and Citizens for Pennsylvania's Future ("PennFuture") (collectively, "Petitioners") hereby petition the Administrator of the U.S. Environmental Protection Agency ("Administrator" or "EPA") to object to Title V Operating Permit No. 0051-OP23 ("Renewal Permit") issued by the Allegheny County Health Department ("ACHD" or "Department") on August 1, 2023 (which finalized the "Proposed Permit" numbered 0051-OP22 issued on June 14, 2023 and the "Draft Permit" numbered also 0051-OP22 dated May 26, 2022) to the Mon Valley Works Edgar Thomson Plant ("facility" or "Edgar Thomson Plant"), owned and operated by the United States Steel Corporation ("U.S. Steel"), located in Allegheny County, Pennsylvania. The Edgar Thomson Plant is located in an area that has been designated by Pennsylvania as an Environmental Justice area.[1] As required, Petitioners are filing this Petition with the Administrator via the Central Data Exchange and providing copies via email and certified U.S. mail to ACHD and U.S. Steel.

[1] Dep't of Envtl. Prot., PA Environmental Justice Areas, EJ Areas Viewer, www.dep.pa.gov/EJViewer (last visited on Sept. 22, 2023) (enter the Edgar Thomson Plant address, 13th Street and Braddock Avenue, Braddock, PA 15104, in the address search box).

As discussed further below, EPA must object to the Renewal Permit because it does not include testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with multiple applicable requirements for the U.S. Steel Mon Valley Works' Edgar Thomson Plant's blast furnaces and casthouses, blast furnace stoves, vacuum degasser flare, vacuum degasser, basic oxygen process ("BOP") shop, caster tundish preheaters, Riley boilers, circulating water cooling towers, BOP process (roof), and blast furnace gas flare. The pollutants of concern include CO, hydrogen chloride ("HCl"), NOx, PM (condensable), PM (filterable), PM2.5, PM10, SO2, total hazard air pollutants ("HAPs"), and VOCs.

II. PETITIONERS

The Environmental Integrity Project ("EIP") is a national non-profit organization based in Washington, D.C. dedicated to ensuring 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 Clairton Plant. EIP has three goals: (1) to provide objective analysis of how the failure to enforce and implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities obtain the protection of environmental laws.

Clean Air Council ("CAC") is a non-profit environmental health organization with offices in Philadelphia and Pittsburgh, Pennsylvania CAC has been working to protect everyone's right to a clean and healthy environment for over 50 years. CAC has members throughout Pennsylvania and the Mid-Atlantic region who support its mission, including many in Allegheny County.

PennFuture is a Pennsylvania-statewide environmental organization dedicated to leading the transition to a clean energy economy in Pennsylvania and beyond. PennFuture strives to protect our air, water and land, and to empower citizens to build sustainable communities for future generations. A main focus of PennFuture's work is to improve and protect air quality across Pennsylvania through public outreach and education, advocacy, and litigation.

III. PROCEDURAL BACKGROUND

This petition addresses the ACHD's renewal of Title V Permit No. 00521-OP22 for the U.S. Steel Mon Valley Works Edgar Thomson Plant, which is located in Allegheny County at 13th Street and Braddock Avenue, Braddock, PA 15104.

The previous Title V operating permit for the Edgar Thomson Plant expired on April 12, 2021. U.S. Steel prepared a Title V renewal application in October 2020, and ACHD noticed the Draft Permit for public comment on May 25, 2022, setting a public comment deadline of June 30, 2022. A public hearing was held on June 29, 2022. On June 30, 2022, petitioners timely filed significant Public Comments on the Draft Permit. *See* Exhibit 1, Comments Regarding Draft Renewal Title V Permit No. 0051-OP22 ("Comments").

ACHD provided Petitioners with the Final Renewal Permit, Technical Support Document (attached here as Exhibit 2)[2], and the "Summary of Public Comments and Department Responses on the Proposed Issuance of the U.S. Steel Edgar Thomson Plant Title V Operating Permit No. 0551" ("Response to Comments") (attached here as Exhibit 3) on July 5, 2023.

[2] In Petitioners' Comments Petitioners sometimes referred to the Technical Support Document as the Review Memo. *See* Ex. 1 Petitioners' Comments. The document appears to serve the purpose of the Statement of Basis required by 40 C.F.R. 70.7(a)(5). *See* Ex. 2, Technical Support Document.

EPA's 45-day review period began on June 14, 2023 and ended on July 29, 2023. EPA did not object to the Renewal Permit during that period, which initiated the start of the 60-day public petition period that has a deadline of September 26, 2023. Accordingly, this Petition is timely filed.

IV. LEGAL REQUIREMENTS

Federal operating permits are the primary method for enforcing and assuring compliance with the Clean Air Act's pollution control requirements for major sources of air pollution. Operating Permit Program, 57 Fed. Reg. 32,250, 32,258 (July 21, 1992). Prior to enactment of the federal operating permit program, regulators, operators, and members of the public had difficulty determining which requirements applied to each major source and whether sources were complying with applicable requirements. This was a problem because applicable requirements for each major source were spread across many different rules and orders, some of which did not make it clear how general requirements applied to specific sources.

One of the primary purposes of the Title V operating permit program 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," to enable "[i]ncreased source accountability and better enforcement." *Id*. at 32,251. The federal operating permit program was created to improve compliance with, and to facilitate enforcement of, Clean Air Act requirements by requiring each major source to obtain an operating permit that: (1) lists all applicable federally-enforceable requirements; (2) contains enough information for readers to determine how applicable requirements apply to units at the permitted source; and (3) establishes monitoring requirements that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a) and (c); *Virginia v. Browner*, 80 F.3d 869, 873 (4th Cir.

1996) ("The permit is crucial to implementation of the Act: it contains, in a single, comprehensive set of documents, all CAA requirements relevant to the particular source."); *Sierra Club v. EPA*, 536 F.3d 673, 674-75 (D.C. Cir. 2008) ("But Title V did more than require the compilation in a single document of existing applicable emission limits. . . . It also mandated that each permit . . . shall set forth monitoring requirements to assure compliance with the permit terms and conditions").

It is the Title V permitting authority's responsibility to ensure that a proposed permit "'set[s] forth'" conditions sufficient "'to assure compliance with all applicable requirements'" of the Clean Air Act. *In the Matter of Sandy Creek Services, LLC, Sandy Creek Energy Station, McLennan County, TX,* Order on Petition No. III-2018-1 (June 30, 2021) ("Sandy Creek Order") at 12 (quoting 42 U.S.C. § 7661c(c)). 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 the permit. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1). A "monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards." *See Sierra Club,* 536 F.3d at 677.

All emission limits in a Title V permit must be enforceable as both a legal and practical matter. In order for a limit to be enforceable under the Clean Air Act, it must be 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." *In the Matter of Orange Recycling and Ethanol Production Facility, Pencor-Masada Oxynol, LLC,* Order on Petition No. II-2001-05 7 (Apr. 8, 2002). The permitting authority's rationale for any proposed permit conditions must be clear and documented in the

permit record, 40 C.F.R. § 70.7(a)(5), and "permitting authorities have a responsibility to respond to significant comments" received on a proposed permit. *In the Matter of CITGO Refining and Chemicals Co., L.P., West Plant, Corpus Christi, TX,* Order on Petition No. VI-2007-01 (May 28, 2009) ("CITGO Order") at 7.

EPA must object to any Title V permit that fails to include or assure compliance with all applicable requirements of the Clean Air Act. 40 C.F.R. § 70.8(c). "Applicable requirements" include any requirements of a federally enforceable SIP and any preconstruction requirements that are incorporated into the Title V permit. *In the Matter of Pac. Coast Bldg. Prods., Inc.,* Permit No. A00011, Clark County, NV (Dec. 10, 1999) ("Pac. 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."). 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." 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). The Administrator "shall issue an objection" if the petitioner demonstrates "that the permit is not in compliance with the requirements of [the Clean Air Act], including the requirements of the applicable implementation plan." 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1). The Administrator "shall grant or deny such petition within 60 days after the petition is filed." 42 U.S.C. § 7661d(b)(2).

V. GROUNDS FOR OBJECTION

For all the reasons discussed below, EPA must object to the Title V Renewal Permit for the Edgar Thomson Plant.

A. The Renewal Permit Does Not Include Sufficient Monitoring and Testing Requirements for NOx, CO, VOCs, or PM (condensable) Emissions from the Blast Furnaces and Casthouses.

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

The Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements that assure continuous compliance with hourly (lbs/hr) and 12-month rolling (tons/year, with a year "defined as any consecutive 12-month period) limits for NOx, CO, VOCs, or PM (condensable)[3] emissions from the blast furnaces and casthouses. Renewal Permit, at 44–47, Condition V.A.2(b), (c), and (d); V.A.1(m) and (p); Technical Support Document at 29–32. According to ACHD, the "PM emission is based on Article XXI standard, §2104.02.c for Iron production," which is part of ACHD's EPA-approved State Implementation Plan ("SIP"). Technical Support Document, at 66; 67 Fed. Reg. 68,935 (Nov. 14, 2002). ACHD's Permit states that the PM, NOx, CO, and VOC limitations at Condition V.A.1(m) are based on ACHD Article XXI §§ 2103.12.a.2.B; 2104.02.c.9.A, which are part of ACHD's EPA-approved SIP. Renewal Permit, at 44; 67 Fed. Reg. 68,935 (Nov. 14, 2002); 69 Fed. Reg. 52,831 (Aug. 30, 2004) (for 2103.12); 63 Fed. Reg. 32,126 (June 12, 1998) (rescinded by SIP revision consisting of citation changes, 67 Fed. Reg. 68,935 (Nov. 14, 2002)) (for 2104.02).

Specifically, the Renewal Permit subjects the blast furnaces and casthouses to hourly (lbs/hr) and 12-month rolling (tons/year, with a year "defined as any consecutive 12-month period") emission limits for NOx, CO, VOC, and PM (condensable) that must be met at all times

[3] Petitioners note that the Renewal Permit removed the hydrogen chloride ("HCl") limits for this source, which appears to have been an error by ACHD, given that ACHD responded to comments from U.S. Steel requesting to remove the HCl limits for this source by stating that the limitations would remain "unchanged." *See* Response to Comments, at 8 (Responses to Comments 18 and 19) and *see infra* Section V.I. These hourly and 12-month rolling HCl limits in the Draft Permit were applicable requirements and ACHD did not provide a rationale for their exclusion from the Renewal Permit. As such, Petitioners' grounds for EPA to object to the permit on the basis that the monitoring and testing requirements in the Renewal Permit for the blast furnaces and casthouses are insufficient to assure compliance should apply the HCl limits that were in the Draft Permit but were omitted from the Renewal Permit.

(*see* Renewal Permit Conditions V.A.1.(m) and (p)). It also states that the emission limits for Blast Furnace No. 1 and Casthouse and Blast Furnace No. 3 and Casthouse apply to emissions exhausting at the shared Casthouse Baghouse (*id.* Section V.A). Yet the permittee is required only to conduct NOx, CO, and SO2 emissions tests on both blast furnaces' casthouse baghouses every two years and VOC emissions testing on each blast furnace casthouse baghouse every four years. *Id*. Condition V.A.2.(b), (c), and (d). This testing is too infrequent to ensure emissions meet the applicable hourly and 12-month rolling limits, which apply at all times. 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77; *In re Northeast Maryland Waste Disposal Authority*, Order on Petition No. III-2019-2, at 9, (Dec. 11, 2020) ("NMWDA Order"), *available at* https://www.epa.gov/sites/default/files/202012/documents/montgomery_response2019.pdf.

In addition, the requirements related to the inspection and operation of the Continuous Parametric Monitoring Systems ("CPMS") for the blast furnaces' casthouse emission control system baghouse do not cure deficient monitoring, testing, and reporting requirements for NOx, CO, VOCs, and PM (condensable) limits. Permit Conditions V.A.3(d), (e), (f), (g), (h), and (i). As a general matter, baghouses are primarily designed to control emissions of PM (filterable), not NOx, CO, all VOCs, or PM (condensable).[4] *See* Monitoring by Control Technique – Fabric Filters, EPA, *available at* https://www.epa.gov/air-emissions-monitoring-knowledge-base/monitoring-control-technique-fabric-filters (last accessed Sept. 23, 2023). Here, the Department did not explain how the CPMS requirements assure compliance with the hourly and annual NOx, CO, VOC, and PM (condensable) limits. At best, the CPMS requirements include

[4] The NESHAP for which these emissions controls were derived and to which this facility is required to follow, 40 CFR § 63 FFFFF: National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities, used PM as a surrogate to regulate HAPs emitted by these processes and required baghouses and venturi scrubbers as effective controls for PM. See 66 Fed. Reg. 36843 (July 13, 2001).

monitoring for the PM concentration limit (0.01 gr/dscf) and opacity limits for the blast furnaces. *See* Condition V.A.3(l). The Department does not explain how the other monitoring, testing, and reporting requirements assure compliance with the hourly and annual NOx, CO, VOC, or PM (condensable) limits.

The Renewal Permit requires NOx, CO, and SO2 emissions tests on both blast furnaces' casthouse baghouses only once every two years and requires VOC emissions testing on each blast furnace casthouse baghouse only once every four years. Renewal Permit, Condition Condition V.A.2.(b), (c), and (d). Neither the Renewal Permit, Technical Support Document, nor the Response to Comments provide a reasoned explanation as to how a biennial emissions tests for NOx, CO, and SO2, quadrennial emissions tests for VOCs, or the CPMS requirements for the blast furnaces' casthouse emission control system baghouse assure continuous compliance with the permit's hourly and 12-month rolling emission limits for NOx, CO, VOCs, or PM (condensable).

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *In the Matter of Wheelabrator Baltimore, L.P.* ("Wheelabrator Order"), Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *In the Matter of United States Steel, Granite City Works* (Granite City I Order), Order on Petition No. V-2009-03 at 7-8 (January 31, 2011). Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 C.F.R. § 70.6(a)(3)(i)(B).

3. Inadequacy of Permit Term

Emissions testing required only once every two years for NOx, CO, and SO2 emissions or once every four years for VOC emissions do not assure compliance with the Renewal Permit's emissions limits that are hourly and 12-month rolling limits for these pollutants and PM. These limits which must be met hourly and in every consecutive rolling 12-month period, respectively.

Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B). In 2008, the D.C. Circuit Court of Appeals vacated an EPA rule that would have prohibited state and local authorities from adding monitoring provisions to Title V permits if needed to "assure compliance." *See Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008). The court stated that a "monitoring requirement insufficient 'to assure compliance' with emission limits has no place in a [Title V] permit unless and until it is supplemented by more rigorous standards." *Id*. at 677 (citing 40 C.F.R. § 70.6(c)(1)). In addition, the court acknowledged that the mere existence of periodic monitoring requirements may not be sufficient. *Id*. at 676–77. For example, the court noted that annual testing is unlikely to assure compliance with a daily emission limit. *Id*. at 675. In other words, the frequency of monitoring must have a reasonable relationship to the averaging time used to determine compliance. *Id*.

Since then, EPA has expressly found that annual testing alone is insufficient to assure compliance with an hourly limit. *In re Northeast Maryland Waste Disposal Authority*, Order on Petition No. III-2019-2, at 9, (Dec. 11, 2020) ("NMWDA Order"), *available at* https://www.epa.gov/sites/default/files/2020-12/documents/montgomery_response2019.pdf. In that order, EPA found that petitioners demonstrated that the annual stack testing required to demonstrate compliance with an hourly limit for HCl at Covanta's incinerator in Montgomery County, Maryland was insufficient and that the additional monitoring measures cited by the

permitting agency did not cure the deficiency. *Id.* In fact, in the NMWDA Order, the EPA strongly suggested that even monitoring on a 3-hour basis is likely inadequate to assure continuous compliance with an hourly standard. *Id.* at 10–11, note 10 ("use of a 3-hour block average, even if using a certified HCl CEMS, is likely inappropriate for demonstrating compliance with a 1-hour standard.").

In addition, the rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *In the Matter of Consolidated Environmental Management, Inc. – Nucor Steel St. James Parish, Louisiana Pig Iron and DRI Manufacturing*, Order on Petition Nos. VI-201-05, VI-2011-06 and VI-2012-07, at 46 (Jan. 30, 2014) (referencing *In the Matter of CITGO Refining & Chemicals Co.,* Order on Petition No. VI-2007-01 at 7 (May 28, 2009)); *In the Matter of United States Steel, Granite City Works* ("Granite City I Order"), Order on Petition No. V-2009-03, at 7–8 (Jan. 31, 2011).

EPA has reinforced and supported these decisions in multiple orders it has issued in response to Title V petitions. *See, e.g.*, *In the Matter of: Wheelabrator Baltimore, L.P., Baltimore Maryland*, Order Responding to Petitioners' Request that Administrator Object to the Issuance of a Title V Operating Permit, Permit No. 24-510-01886 (Apr. 14, 2010) ("Wheelabrator Baltimore Order") (finding that MDE failed to analyze whether multiple monitoring requirements sufficiently assured compliance with emission limits and failed to include the methodology for monitoring to assure compliance with applicable requirements in the Title V permit); *In the Matter of: Tennessee Valley Authority, Bull Run, Clinton, Tennessee*, Order Responding to Petitioners' Request that the Administrator Object to the Issuance of a Title V Operating Permit, Petition No. IV-2015-14 (Nov. 11, 2016) ("TVA Bull Run Order") (finding that the permit did not include sufficient monitoring requirements for an applicable opacity limit

and directing TDEC to require PM CEMS to demonstrate compliance with the limit); *In the Matter of: Kinder Morgan Crude & Condensate LLC, Galena Park, Harrison County, Texas,* Order Responding to Petition Requesting Objection to the Issuance of Title V Operating Permit, Petition No. VI-2017-15 (Dec. 16, 2021) ("Kinder Morgan Order") (where EPA granted petitioners' objection that monitoring associated with emissions limits on two heaters failed to assure compliance with emissions limits for VOCs because there was no indication in the permit that there were monitoring requirements associated with VOCs).

Similarly, in the Renewal Permit for the Edgar Thomson facility, emissions testing that is required only once every two years or once every four years is clearly not sufficient to assure continuous compliance with short-term emission limits for NOx, CO, VOCs, or PM (condensable) emissions from the Blast Furnaces and Casthouses that must be met on hourly and 12-month rolling bases.

The Department has not identified any other testing or monitoring requirements for these emission limits in the Renewal Permit or provided a clear and documented rationale for how biennial or quadrennial emissions tests assure compliance with the short-term emission limits in the Renewal Permit or Technical Support Document as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.a of their Comments, which stated the same points above. Ex. 1 at 29–31 (and 28–29).

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit assures compliance with hourly and rolling annual emission limits for NOx, CO, VOCs, or PM (condensable) emissions from the Blast Furnaces and Casthouses. In response to Petitioners' Comments, the Department states:

> The potential emission in the draft permit is based on worst case scenario and the maximum capacity/throughput of the equipment. The actual emission reported in 2021 for PM is significantly lower at 0.03 tons/yr. Requiring a PM CEM for a pollutant where emissions are low is infeasible, and the Department believes that the biennial stack testing will demonstrate compliance with the emissions limit. The Department also feels that regular testing combined with recordkeeping and reporting of gas use is sufficient to demonstrate compliance with the gaseous emissions limits. See the Technical Support Document for a detailed evaluation of monitoring requirements.

Response to Comments, at 23 (Response to Comment 66). The Technical Support Document, in turn, does not provide additional detail demonstrating that the monitoring requirements in the permit assure compliance with hourly and rolling annual emissions limits. *See* Technical Support Document, Appendix C, Monitoring Analysis, at 66–67. For example, for PM, the Monitoring Analysis for the blast furnaces and casthouses states that the likelihood of violating the PM limit is "very low," that the PM emissions in the emissions inventory for the last few years were lower than the limit, restates for PM that biennial testing is required, states that CPMS requirements for the baghouse apply (including, for example, a requirement to "[p]erform daily inspection of the compressed air supply for the pulse jet baghouse"). *Id.* None of these points is relevant to the legal standard under the Clean Air Act, cures the insufficient testing and monitoring provisions, or addresses Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance. The analyses for NOx, CO, and VOCs are similarly lacking justification for the inadequacy of the monitoring requirements to assure compliance. *Id.* A "very low" likelihood of a limit being violated is not a zero likelihood, and low emissions in the last three years is not necessarily predictive of future emissions, especially given that the last three years included a global pandemic that may have resulted in emissions lower than future emissions. The CMPS requirements for the

baghouse only potentially address PM filterable and there is no discussion whatsoever of how other pollutants would be addressed. Continuous emissions monitoring is available and would provide adequate testing and monitoring to assure compliance. Comments, at 30–31 (Comment 8.a). The Department did not address or provide a rationale for declining to require monitoring and testing requirements that would be frequent enough to ensure continuous compliance, nor explain how its proposed testing and monitoring would assure compliance.

Neither the Response to Comments nor the Technical Support document provide a rationale for its inadequate monitoring and testing requirements here. A statement that the Department "feels" the permit requirements are sufficient without an explanation falls far short of what the Clean Air Act requires. Just because the Department "feels" that infrequent testing combined with recordkeeping and reporting of gas use is sufficient to demonstrate compliance with the gaseous emissions limits does not make it so.

Therefore, the Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment. Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual testing alone, which is more than the Renewal Permit requires, would be insufficient to assure compliance with rolling 12-month limits or hourly limits. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9. In conclusion, the Renewal Permit is deficient because it does not include sufficient testing, monitoring, reporting, and recordkeeping requirements for hourly and rolling 12-month limits for NOx, CO, VOCs, or PM (condensable) emissions from the Blast Furnaces and Casthouses.

B. The Renewal Permit Does Not Include Sufficient Monitoring and Testing Requirements for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOC Emissions from the Blast Furnace Stoves.

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

The Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements to assure continuous compliance with hourly and rolling 12-month emissions limits for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOCs[5] from the Blast Furnace Stoves. Renewal Permit, Conditions V.B.1.e; V.B.2(a). According to ACHD, the PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, and VOC emissions limitations from the Blast Furnace Stoves are derived from ACHD's Article XXI, Sections 2104.03.a.2.B, 2104.02.b, and 2103.12.a.2.B, which are part of ACHD's EPA-approved SIP, as well as RACT IP 0051-I008a, Condition V.B.1.b. *See* Renewal Permit, at 59 (Condition V.1.e); 67 Fed. Reg. 68,935 (Nov. 14, 2002); 69 Fed. Reg. 52,831 (Aug. 30, 2004) (for 2103); 67 Fed. Reg. 68,935 (Nov. 14, 2002) (for Section 2104) (SIP revision consisting of citation changes rescinding 63 Fed. Reg. 32,126 (June 12, 1998).

Specifically, although the Renewal Permit subjects the blast furnace stoves to hourly (lbs/hr) and 12-month rolling (tons/year, with a year "defined as any consecutive 12-month period") limits for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, VOCs that must be met at all times (*see* Renewal Permit Conditions V.B.1(e), the permittee is only required to conduct PM (filterable), PM (condensable), PM10, PM2.5, NOx, and CO emissions tests every

[5] The Renewal Permit removed HCl and total HAP limits and monitoring requirements from this source that had been present in the draft permit. *See* Draft Permit, Conditions V.B.1.e and VB2a. These hourly and 12-month rolling HCl and total HAP limits in the Draft Permit were applicable requirements, the elimination from the Renewal Permit for which ACHD did not provide a clear rationale, and Petitioners' grounds for EPA to object to the permit on the basis that the monitoring and testing requirements in the Renewal Permit are insufficient to assure compliance should also apply to the limits for HCl and HAPs that were in the Draft Permit and should have been included in the Renewal Permit.

two years and VOC emission tests every four years. *Id*. Condition V.B.2.(a). This testing is too infrequent to ensure emissions meet hourly and 12-month rolling limits. 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77; *In re Northeast Maryland Waste Disposal Authority*, Order on Petition No. III-2019-2, at 9, (Dec. 11, 2020) ("NMWDA Order"), *available at* https://www.epa.gov/sites/default/files/202012/documents/montgomery_response2019.pdf.

The Renewal Permit does not identify any other testing or monitoring requirements for the PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOC emission limits. *Id*. The Renewal does impose recordkeeping requirements that "[t]he permittee shall keep and maintain the following data for the No. 1 and No. 3 Blast Furnace Stoves: . . . fuel type and consumption (hourly, daily, monthly, and 12-month)." Renewal Permit, at 61, Condition V.B.4.a. However, neither the Renewal Permit, Technical Review Memo, nor Response to Comments provides a reasoned explanation as to how biennial testing assures continuous compliance with hourly and rolling annual emission limits.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *In the Matter of Wheelabrator Baltimore, L.P.* (Wheelabrator Order), Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8.

3. Inadequacy of Permit Term

Emissions testing required only once every two years for PM (filterable), PM (condensable), PM10, PM2.5, NOx, and CO and only once every four years for VOC emissions

do not assure compliance with the Renewal Permit's hourly and 12-monthly rolling emission limits for these pollutants from the blast furnace stoves, which must be met on hourly and 12-month rolling bases. The frequency of monitoring in a Title V operating permit must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B).

As discussed above, the frequency of monitoring must have a reasonable relationship to the averaging time used to determine compliance. *See Sierra Club v. EPA*, 536 F.3d at 675–77. EPA has expressly found that annual testing alone is insufficient to assure compliance with an hourly limit. NMWDA Order, at 9. Testing required less frequently than annually would, *a fortiori*, also be insufficient to assure compliance with an hourly limit, as would testing required only on a biennial or once every four-year basis be insufficient to assure compliance with a 12-month rolling limit. *Accord* Wheelabrator Baltimore Order; TVA Bull Run Order; Kinder Morgan Order.

In addition, the rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8. "[P]ermitting authorities have a responsibility to respond to significant comments" received on a proposed permit. *In the Matter of CITGO Refining and Chemicals Co., L.P., West Plant, Corpus Christi, TX,* Order on Petition No. VI-2007-01 (May 28, 2009) ("CITGO Order") at 7.

In this case, emissions testing required only once every two years and once every four years are clearly not sufficient to assure continuous compliance with short-term emission limits for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOCs from the Blast Furnace Stoves that must be met on hourly and 12-month rolling bases. The Department has not identified any other testing or monitoring requirement for these emission limits in the Renewal

Permit or provided a clear and documented rationale for how biennial or once every four-year emissions tests assure compliance with the short-term emission limits in the Renewal Permit or Technical Support Document as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.b of their Comments, which stated the same points above. Ex. 1 at 31.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit assures compliance with hourly and 12-month rolling emission limits for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOCs from the Blast Furnace Stoves. In response to Petitioner's Comments, the Department states:

> The Department feels that regular testing combined with recordkeeping and reporting of fuel and fuel consumption is sufficient to demonstrate compliance with the limits. See the Technical Support Document for a detailed evaluation of monitoring requirements. See also the *Response* to Comment #66 above.

Response to Comments, at 23 (Comment 67).

The Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment. First, the Department does not explain how biennial or quadrennial testing will assure compliance with hourly and 12-month rolling emission limits. 40 C.F.R. § 70.7(a)(5). A statement that the Department "feels" the permit requirements are sufficient without an explanation falls far short of what the Clean Air Act requires. Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual stack testing alone is insufficient to assure compliance with an hourly limit. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9.

The Technical Support Document, in turn, does not provide additional detail that the monitoring requirements in the permit assure compliance with hourly and 12-month rolling emissions limits. *See* Technical Support Document, Appendix C, Monitoring Analysis, at 67–68. For example, for PM, the Monitoring Analysis for the blast furnace stoves states that the likelihood of violating the PM limit is "very low," that the PM emissions in the emissions inventory for the last few years were lower than the limit, restates for PM that biennial testing is required, claims, without further support, that the "content of criteria pollutants in the exhaust gas is consistent, so monitoring of fuel use can be used as parametric continuous monitoring of PM," and mentions other required actions (such as recording fuel consumption). *Id.* None of these points is relevant to the legal standard under the Clean Air Act, cures the insufficient testing and monitoring provisions, or addresses Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance. The analyses for NOx, CO, and VOCs are similarly lacking justification for the inadequacy of the monitoring requirements to assure compliance. *Id.* A "very low" likelihood of a limit being violated is not a zero likelihood, and low emissions in the last three years is not necessarily predictive of future emissions, especially given that the last three years included a global pandemic that may have resulted in emissions lower than future emissions.

The Department has also failed to explain how the requirements in the Renewal Permit relating to keeping records of fuel type and consumption can serve as a proxy for measuring compliance with emissions limits or assure compliance with the permit's limits. Renewal Permit, at 61, Condition V.B.4.a. The Department has not explained how this requirement, taken together with the biennial or quadrennial testing, is "sufficient to

demonstrate compliance with the limits" or a reliable measure to determine compliance with hourly or 12-month rolling emissions limitations that must be met at all times. *See* Response to Comments, at 23 (Comment 67). The Department did not address or provide a rationale for not requiring monitoring and testing requirements that would be frequent enough to ensure continuous compliance, examples of which were provided in Petitioners' Comments, nor explain how its proposed testing and monitoring would assure compliance. *See* Comments, at 31 (Comment 8.b, also referring to Comment 8.a).

In conclusion, the Renewal Permit is deficient because it does not include sufficient testing, monitoring, reporting, and recordkeeping requirements for hourly and 12-month rolling limits for PM (filterable), PM (condensable), PM10, PM2.5, NOx, CO, or VOCs from the Blast Furnace Stoves.

C. The Renewal Permit Does Not Include Sufficient Monitoring and Testing Requirements for the Sulfur Concentration Limits in the Effluent Gas from the Vacuum Degasser.

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

The Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements to assure continuous compliance with the permit's sulfur concentration limits in the effluent gas from the Vacuum Degasser.

The Renewal Permit does not include sufficient monitoring and testing requirements to assure compliance with its term prohibiting the concentration of sulfur oxides expressed as sulfur dioxide in the effluent gas from the Vacuum Degasser from exceeding the lesser of the potential to emit or 500 ppm (dry volumetric basis) at any time. Renewal Permit, Condition V.G.1.c. According to ACHD, this operational limit is derived from ACHD Article XXI § 2104.03.c, which is part of ACHD's EPA-approved SIP. *See* Renewal Permit, at 99; 67 Fed. Reg. 68,935

(Nov. 14, 2002) (SIP revision consisting of citation changes rescinding 63 Fed. Reg. 32,126 (June 12, 1998).

The monitoring requirements state that U.S. Steel must measure the sulfur concentration of all coke oven gas used for combustion of flaring at the facility at least once every twenty-four hours. Renewal Permit, Condition V.G.3.b. However, the Renewal Permit states that coke oven gas measurements taken at the U.S. Steel Clairton facility may satisfy this requirement. *Id.* The Renewal Permit does not state how frequently measurements are taken at the Clairton facility, what the "current operating scenario" is, or explain why measurements taken at the Clairton facility are sufficient to assure compliance with the Edgar Thomson Plant emission limit. *See id.*; Technical Support Document, at 71 (Appendix C Monitoring Analysis). The Department failed to specify how frequently sulfur concentration measurements of coke oven gas are taken at the Clairton facility, failed to provide an explanation as to why this is sufficient to assure compliance with the "at any time" limit applicable to the Edgar Thomson facility, and failed to address Petitioners' comments. 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.7(a)(5); Citgo Order, at 7.

The Renewal Permit does not identify any other testing or monitoring requirements for these requirements. *Id*. Neither the Renewal Permit, Technical Review Memo, or Response to Comments provide a reasoned explanation as to the permit's monitoring and testing requirements are sufficient to assure compliance with the sulfur concentration limits in the effluent gas from the vacuum degasser.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *In the Matter of Wheelabrator Baltimore, L.P.* (Wheelabrator Order),

Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7-8.

3. Inadequacy of Permit Term

The Department failed to specify how frequently sulfur concentration measurements of coke oven gas are taken at the Clairton facility, failed to provide an explanation as to why this monitoring measure is sufficient to assure compliance with the sulfur concentration limits in the effluent gas from the Vacuum Degasser that are applicable to the Edgar Thomson facility "at any time," and failed to address Petitioners' comments. 40 C.F.R. § 70.6(a)(3)(i)(B); 40 C.F.R. § 70.7(a)(5); Citgo Order, at 7.

The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8. In addition, "permitting authorities have a responsibility to respond to significant comments" received on a proposed permit. *In the Matter of CITGO Refining and Chemicals Co., L.P., West Plant, Corpus Christi, TX,* Order on Petition No. VI-2007-01 (May 28, 2009) ("CITGO Order") at 7.

In this case, the Department failed to provide a documented rationale for how monitoring conducted at another facility, the Clairton Plant, for which no frequency is specified in the Edgar Thomson Title V permit, is sufficient to assure compliance with the sulfur limits in the Edgar Thomson Title V permit. The Renewal Permit's monitoring requirements for the sulfur concentration limits in the effluent gas from the Vacuum degasser at the Edgar Thomson Plant are insufficient to assure compliance with the sulfur concentration limits that apply at all times. The Department has not identified any other testing or monitoring requirement for these limits in

the Renewal Permit or provided a clear and documented rationale for how these monitoring provisions assure compliance with permit's limits for the Vacuum Degasser as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.d of their Comments, which stated the same points above. Ex. 1 at 33.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's monitoring and testing requirements assure compliance with the sulfur concentration limits in the effluent gas from the Vacuum Degasser. The Department's response is:

> The Vacuum Degasser uses desulfurized COG fuel, which is produced in Clairton and the Department believes that it is appropriate to have the concentration of the coke oven gas measured at Clairton. The Department believes that the monitoring and work practice requirements in the permit assure compliance with the terms and conditions of the permit section and a properly operating vacuum degasser and flare system will not emit visible emissions that violate the Article XXI opacity standard.
>
> In addition, the reported emissions inventory for the source in the last five (5) years is less than 2 tons, which is not a source of significant emissions, and it has no history of compliance problems. As referenced in condition V.G.3.c, the Department reserves the right to revert the monitoring frequency back from monthly to weekly at any time.

Response to Comments, at 25 (Comment 69).

The Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment. A statement that the Department "believes" the requirements assure compliance without an explanation falls far short of what the Clean Air Act requires. The Department did not provide a rationale to explain how sulfur measurements taken at Clairton, the frequency of which are not provided in the Renewal Permit, are sufficient to assure compliance with the sulfur concentration limits that apply at all times at Edgar Thomson.

Under Title V, testing, monitoring, and reporting requirements must be included in the Title V permit itself. *In the Matter of Valero Refining-Texas, L.P. Valero Houston Refinery*, Order on Petition No. VI-2021-8, at 23 (Jun. 30, 2022) (Valero Order) (finding that the Title V permit itself must include or clearly incorporate by reference monitoring requirements that assure compliance with emissions limits set forth in incorporated Permits-by-rule). The monitoring provisions of the Edgar Thomson Renewal Permit itself do not assure compliance with the sulfur concentration limits in the Renewal Permit because they allow for measurements taken at Clairton to monitor compliance without including any of the terms or the frequency of the monitoring at Clairton. The Renewal Permit's reliance on sulfur monitoring that may or may not be taken at Clairton, the requirements of which are not included in or expressly incorporated by reference into the Renewal Permit, do not meet the Clean Air Act's requirements.

In conclusion, the Renewal Permit is deficient because it does not include sufficient testing, monitoring, and recordkeeping requirements to assure continuous compliance with applicable requirements for the Vacuum Degasser or its flare.

D. The Renewal Permit Does Not Provide Sufficient Monitoring and Testing Requirements to Assure Compliance with the NOx, CO, or VOC Emission Limits from the Basic Oxygen Process Shop.

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

The Renewal Permit is deficient because its monitoring and testing requirements are insufficient to assure compliance with the NOx, CO, or VOC emissions limits from the Basic Oxygen Process ("BOP") shop. The Draft Permit subjects the BOP shop to hourly (lbs/hour) and 12-month rolling (tons/year, "defined as any consecutive 12-month period") emission limits of NO_X, CO, and VOCs. Renewal Permit, Condition V.D.1(l). According to ACHD, these limits are derived from ACHD Article XXI Regulations at Sections 2103.12.a.2.B and 2104.02.c.9.B, which are part of ACHD's EPA-approved SIP. *See* Renewal Permit, at 67 (Condition V.D.1(l));

69 Fed. Reg. 52,831 (Aug. 30, 2004) (for Section 2103); 67 Fed. Reg. 68,935 (Nov. 14, 2002) (for Section 2104) (SIP revision consisting of citation changes rescinding 63 Fed. Reg. 32,126 (June 12, 1998).

The Renewal Permit also subjects the F&R BOP Secondary Emission Control System and the BOP Mixer and Desulfurization process to hourly and 12-month rolling emissions limits of VOCs. *See* Renewal Permit Condition V.D.1(m) and (p). According to ACHD, the Condition V.D.1(m) limits are derived from Installation Permit IP 0051-I004a and Article XXI Section 2103.12.a.2.B, which is part of ACHD's EPA-approved SIP. Renewal Permit, at 67; 69 Fed. Reg. 52,831 (Aug. 30, 2004). According to ACHD, the Condition V.D.1(p) limits are derived from Article XXI Section 2104.02.c.9, which is part of ACHD's EPA-approved SIP. Renewal Permit, at 68; 67 Fed. Reg. 68,935 (Nov. 14, 2002) (SIP revision consisting of citation changes rescinding 63 Fed. Reg. 32,126 (June 12, 1998).

The Renewal Permit requires performance tests for the BOP Mixer and Desulfurization Baghouse once every five years. Renewal Permit, at 69, Condition V.D.2(c). The Draft Permit requires NO_X, CO, and VOC emissions tests on the BOP Shop venturi scrubber once every two years. Renewal Permit, at 69, Condition V.D.2(f). These requirements are too infrequent to assure compliance with these sources' hourly or 12-month rolling emissions limits for NO_X, CO, and VOCs. Renewal Permit Conditions V.D.1(l), (m), and (p). The Renewal Permit, Response to Comments, and Technical Support Document do not state whether any testing or monitoring requirements are applicable to emissions from stacks S007 and S008.

The Draft permit also requires the permittee to install, operate, and maintain a CPMS on the BOP secondary baghouse system; the installation, operation, and maintenance of a leak detection system on the mixer baghouse; daily, weekly, monthly, and quarterly inspections of

various parts and operations of the BOP secondary and mixer baghouses; and the installation, operation, and maintenance of a CPMS on the venturi scrubber. Renewal Permit at 71–72, Condition V.D.3(b), (c), (d), and (e).

However, baghouses are primarily designed to control emissions of PM and certain HAPs. Similarly, venturi scrubbers are primarily used to control PM emissions. Neither the Renewal Permit, the Response to Comments, nor the Technical Support Document explain how these monitoring requirements assure compliance with the hourly and annual emissions limits for NOx, CO, and VOCs from the BOP shop sources.

The Renewal Permit does not identify any other testing or monitoring requirements for these requirements. Neither the Renewal Permit, Technical Review Memo, or Response to Comments provide a reasoned explanation as to the permit's monitoring and testing requirements are sufficient to assure compliance with these limits for the BOP shop emission sources.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); Wheelabrator Order, Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8.

3. Inadequacy of Permit Term

The Renewal Permit's quintennial performance tests required for the BOP Mixer and Desulfurization Baghouse and biennial emissions tests for NOx, CO, and VOC emissions on the

BOP Shop venturi scrubbers are too infrequent to assure compliance with these sources' hourly or 12-month rolling emissions limits for NOx, CO, and VOCs. Renewal Permit Conditions V.D.2(c), (f), V.D.1(l), (m), (p). Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. As noted previously, EPA has concluded that even annual stack testing alone is insufficient to assure compliance with an hourly limit. *See* discussion *supra* Section V.A.3.

In this case, biennial and quadrennial tests are clearly not sufficient to assure continuous compliance with short-term emission limits that must be met on hourly and 12-month rolling bases. *Id.* There are no other testing or monitoring requirements identified in the Renewal Permit for these emission limits, and the Department has failed to provide a clear and documented rationale in the Renewal Permit or Technical Support Document that describes how biennial emissions tests or quadrennial performance tests assure continuous compliance with short-term emission limits for the NOx, CO, and VOCs from the BOP shop as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.e of their Comments, which stated the same points above. Ex. 1 at 33–34.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's monitoring and testing requirements assure compliance with the NOx, CO, and VOC emission limits from the BOP shop. The Department's response in full is:

> Condition V.D.2.f requires the facility to perform biennial testing of the gaseous emissions and the Department believes that the testing frequency will demonstrate compliance with the limit. In addition, the Department cannot arbitrarily require

> the facility to install CEM, and it would require an enforcement order to require installation of a CEM and cannot be done through the permit renewal process.

Response to Comments, at 26 (Comment 70).

The Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment. A statement that the Department "believes" the permit requirements are sufficient without an explanation falls far short of what the Clean Air Act requires. The Department did not increase monitoring frequency or justify how these monitoring and testing requirements will assure compliance with hourly and annual limits. 40 C.F.R. § 70.7(a)(5). Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual testing alone is insufficient to assure compliance with an hourly limit. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9.

Finally, the Department suggests that requiring continuous emissions monitoring in the renewal permit process would be "arbitrary" and may only be accomplished through an enforcement order. *See* Response to Comments, at 26 (Comment 70). This is simply inaccurate. *See, e.g.*, *Sierra Club v. EPA,* 536 F.3d 673, 677–78 (D.C. Cir. 2008). The Department has an affirmative obligation to supplement the Renewal Permit with testing and monitoring requirements that assure continuous compliance with emission limits. *Id.* In fact, EPA only last week rejected this identical argument by ACHD that requiring installation of CEMS would require an enforcement order when it granted a claim in a petition to object to the Title V permit for U.S. Steel's Clairton Plant. In *In the Matter of* United States Steel Corporation, Clairton Coke Works Permit No. 0052-0P22, Order on Petition Nos. 111-2023-5 and 111-2023-6, at 7–11 (Sept. 18, 2023) ("Clairton Order"), Petitioners challenged ACHD's claim that installing CEMS would require an enforcement order and was not appropriately done in the Title V permit renewal process. EPA rejected ACHD's arguments and granted petitioners' request that EPA

order ACHD to revise the permit to include sufficient monitoring and testing requirements, stating:

> [I]n response to the Petitioners' comments requesting the installation of a CEMS for PM and PM10, ACHD claimed that "it would require an enforcement order to require installation of a new CEM[S] and cannot be done through the permit renewal process." RTC at 44. This is not the case. Nothing in the CAA or EPA's part 70 regulations prevents permitting authorities from requiring the use of CEMS through the title V permitting process or restricts the addition of certain monitoring requirements to enforcement orders. In fact, EPA has generally determined that "statutory and regulatory provisions establish a floor on the monitoring that *must* be included in a title V permit, not a ceiling on the monitoring that *may* be included." *In the Matter of* Cargill, Inc. Blair Facility, Order on Petition No. VII-2022-9 at 15-16 (Feb. 16, 2023) (emphasis in original). The Petitioners do not allege in the Petition that it is necessary to install and operate a CEMS in order to assure compliance with the limits at issue, so EPA need not reach that issue here. However, if ACHD determines that operation of a CEMS is necessary to assure compliance with all applicable requirements, it could incorporate such requirements through the title V process.

Clairton Order, at 10.

Here, ACHD made a similar claim in its Response to Comments for the Edgar Thomson Renewal Permit as it did for the Clairton permit that requiring CEMS would require an enforcement order and cannot be done through the permit renewal process, and EPA should reject ACHD's argument here as it did for Clairton. EPA should direct ACHD to revise the permit and/or the permit record to ensure the permit has sufficient monitoring and testing to assure compliance, and if ACHD determines that operation of a CEMS is necessary to do that, it could incorporate such requirements through the title V process.

In conclusion, the Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements for hourly and annual NOx, CO, and VOC emission limits for the BOP Shop.

E. The Renewal Permit Does Not Provide Sufficient Monitoring and Testing Requirements to Assure Compliance with the NOx, CO, and VOC Emissions Limits for the Caster Tundish Preheaters.

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

The Renewal Permit is deficient because its monitoring and testing requirements are insufficient to assure compliance with the NOx, CO, and VOC emissions limits from the Caster Tundish Preheaters. The Renewal Permit establishes 12-month rolling emissions limits (in tons/year, "defined as any consecutive 12-month period") for NOx, CO, and VOC emissions from the Caster Tundish Preheaters. Renewal Permit, at 96, Condition V.F.1.(c). According to ACHD, these limits are derived from Permit No. 7035003-002-93900, issued March 1, 1994, and ACHD Article XXI Sections 2101.05.a.1 and 2103.12.a.2.B, which were incorporated into ACHD's EPA-approved SIP. *Id.*; 85 Fed. Reg. 19.668 (Apr. 8, 2020) (for Section 2101.05, which became part of the SIP effective Sept. 29, 2004); 69 Fed. Reg. 52,831 (Aug. 30, 2004) (for Section 2103).

The Renewal Permit imposes no testing requirements on emissions from this source. The Renewal Permit does require the permittee to measure the monthly quantity of natural gas and coke oven gas combusted by the Caster Tundish Preheaters. Renewal Permit Condition V.F.3(a). However, neither the Renewal Permit, the Response to Comments, nor the Technical Support Document describe or explain how the monthly measurement of the quantity of natural gas and coke oven gas combusted will adequately measure NOx, CO, and VOC emissions on a monthly basis to determine or assure compliance with a limit based on emissions in tons per year on a 12-month rolling basis.

The Renewal Permit does not identify any other testing or monitoring requirements for the NOx, CO, and VOC emission limits for the Caster Tundish Preheater. Neither the Renewal Permit, Technical Review Memo, nor Response to Comments provide a clear rationale as to how

the permit's monitoring and testing requirements are sufficient to assure compliance with these limits.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); Wheelabrator Order, at 10. Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8.

3. Inadequacy of Permit Term

The Renewal Permit does not contain any monitoring and testing requirements for the Caster Tundish Preheaters capable of ensuring compliance with the annual NOx, CO, and VOC emissions limits from these sources, and the Department failed to provide a rationale for how a monthly measurement of the quantity of natural gas and coke oven gas combusted will assure compliance with these limits. Title V and its regulations mandate that permit requirements must be included in the permit, as well as be clear and unambiguous. *See* Valero Order at 23–31; Granite City I Order; *In the Matter of ETC Texas Pipeline, LTD WAHA Gas Plant*, Permit No. O2546 at 17-19 (Jan. 28, 2022) ("The Title V permit should contain references that are detailed enough that the manner in which the referenced material applies to the facility is clear and is not reasonably subject to misinterpretation."). The Renewal Permit does not contain any monitoring and testing requirements for the Caster Tundish Preheaters capable of ensuring compliance with the annual NOx, CO, and VOC emissions limits from these sources, and the Department did not

provide a rationale for if or how its monitoring requirement to measure the quantity of natural gas and coke oven gas combusted assure compliance or meet this standard.

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.f of their Comments, which stated the same points above. Ex. 1 at 34.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's monitoring and testing requirements assure compliance with the NOx, CO, and VOC emission limits from the Caster Tundish Preheaters. The Department's response in full is:

> The potential emissions from the Dual Strand Continuous Caster in condition V.F.1.c are from an existing installation permit which are significantly lower than the major threshold emissions limit, and the actual reported emissions inventory within the last five (5) years for any of the criteria pollutant is below 5 tons. Therefore, there is no basis to require emission testing.

Response to Comments, at 26 (Comment 71).

None of these points is relevant to the legal standard under the Clean Air Act, cures the insufficient testing and monitoring provisions, or addresses Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance. That the potential emissions and actual reported emissions in the last five years were lower than the major threshold emissions limit has no relevance to whether the monitoring and testing requirements are sufficient to ensure annual permit limits will be met in the future. The Department failed to justify how its monitoring and testing requirements will assure compliance with annual limits. 40 C.F.R. § 70.7(a)(5). Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9. As stated earlier, the Department has an affirmative obligation to include and even to supplement the Renewal Permit with testing and monitoring requirements that assure continuous

compliance with emission limits. *See, e.g.*, *Sierra Club v. EPA,* 536 F.3d 673, 677–78 (D.C. Cir. 2008).

In conclusion, the Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements for annual NOx, CO, and VOC emission limits for the Caster Tundish Preheaters.

F. The Renewal Permit Does Not Establish Sufficient Monitoring and Testing Requirements to Assure Compliance with the PM, CO, or VOC[6] Hourly and Annual Emission Limits from the Three Riley Boilers.

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

The Renewal Permit is deficient because its monitoring and testing requirements are insufficient to assure compliance with the PM, CO, and VOC hourly and 12-month rolling emissions limits from the Three Riley Boilers. The Renewal Permit establishes hourly and annual emissions limits (tons/year, "defined as any consecutive 12-month period") for PM, CO, and VOCs from the three Riley Boilers. Renewal Permit, at 103, Condition V.H.1(g). According to ACHD, these limits are derived from Article XXI Sections 2103.12.a.2.B, 2102.04.b.5, 2104.02.a.3, 2104.03, and 2104.03.a.2.B, which were incorporated into ACHD's EPA-approved SIP. *Id.*; 69 Fed. Reg. 52,831 (Aug. 30, 2004) (for Section 2103); 67 Fed. Reg. 68,935 (Nov. 14, 2002) (for Section 2104) (SIP revision consisting of citation changes rescinding 63 Fed. Reg. 32,126 (June 12, 1998); 80 Fed. Reg. 36,239 (June 24, 2015) (for Section 2102).

The Renewal Permit requires the permittee to perform PM emissions tests once every two years on the Riley Boilers and emissions test for CO and VOCs once every four years. Renewal

[6] HCl hourly and annual emissions limits that had been contained in the Draft Permit at Condition V.H.1(g), and for which for which Petitioners had commented that monitoring and testing requirements were insufficient to determine compliance, were entirely eliminated from the Renewal Permit without explanation. *Compare* Renewal Permit, at 103, with Draft Permit, at 106.

Permit, at 103–04, Conditions V.H.2(a) and (d). These requirements are too infrequent to assure compliance with these sources' hourly or 12-month rolling emissions limits for PM, CO, and VOCs. Renewal Permit Conditions V.H.1(g). In addition, the Renewal Permit requires the permittee to take notations of visible emissions from the boilers at least once a week with the option of changing to monthly after six consecutive months of compliance with the weekly monitoring. Renewal Permit, at 105, Condition V.H.3(f). However, visible emissions monitoring cannot reliably measure CO, VOCs, PM (filterable), or PM10 (filterable). Even if it could, this monitoring frequency is not reasonably related to the hourly emissions limits from this source. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); Sierra Club, 536 F.3d at 676–77; NMWDA Order, at 9. As a result, these monitoring and testing requirements do not assure compliance with the Riley Boilers' hourly and 12-month rolling emissions limits for PM, CO, and VOCs.

The Renewal Permit does not identify any other testing or monitoring requirements for these requirements. Neither the Renewal Permit, Technical Review Memo, or Response to Comments provide a reasoned explanation as to the permit's monitoring and testing requirements are sufficient to assure compliance with these limits for the Three Riley Boilers.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); Wheelabrator Order, at 10. Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8.

3. Inadequacy of Permit Term

The Renewal Permit's biennial emissions tests required for PM and quadrennial emissions tests for CO and VOC emissions for the three Riley Boilers are too infrequent to assure compliance with these sources' hourly and 12-month rolling emissions limits for PM, CO, and VOCs. Renewal Permit, at 103–104, Conditions V.H.1(g), V.H.2(a), (d). Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. As noted previously, EPA has concluded that even annual stack testing alone is insufficient to assure compliance with an hourly limit. *See* discussion *supra* Section V.A.3.

Here, biennial and quadrennial tests are clearly not sufficient to assure continuous compliance with short-term emission limits that must be met on hourly and 12-month rolling bases for the Three Riley Boilers. *Id.* The permit's requirement for notations of visible emissions from the boilers once per week, which are allowed by the terms of the permit to be switched to monthly after six consecutive months of compliance with the weekly monitoring, is not a sufficient monitoring requirement both because visible emissions monitoring is not a reliable method of measuring emissions of CO, VOCs, PM (filterable), or PM10 (filterable), and because these monitoring frequencies are not reasonably related to the hourly emissions limits from this source. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. The Department has failed to provide a clear and documented rationale in the Renewal Permit, Response to Comments, or Technical Support Document that describes how biennial or quadrennial emissions tests or visible emissions monitoring assure continuous compliance with short-term emission limits for PM, CO, and VOCs from the Three Riley Boilers as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.g of their Comments, which stated the same points above. Ex. 1 at 34–35.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's monitoring and testing requirements assure compliance with the PM, CO, or VOC emission limits from the Riley Boilers. The Department's response in full is:

> The potential emissions limit for the CO and VOC are 4.76 tons and 1.85 tons respectively. This is significantly lower than the major emissions threshold and the Department does not have any reason to increase the testing frequency or require CEM for these noticeably low emissions. In addition, it would require an enforcement order to require installation of a CEM and cannot be done through the permit renewal process.

Response to Comments, at 26 (Comment 72).

None of these point is relevant to the legal standard under the Clean Air Act, cures the insufficient testing and monitoring provisions, or addresses Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance. The Department says it "does not have any reason to increase the testing frequency or require CEM" given the low previous emissions, but previous low emissions measurements are not relevant to potential future emissions, and the Department did not explain how the existing monitoring and testing requirements will assure compliance with hourly and annual limits for future emissions. 40 C.F.R. § 70.7(a)(5). Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual testing alone is insufficient to assure compliance with an hourly limit. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9.

Finally, the Department suggests that requiring continuous emissions monitoring in the renewal permit process may only be accomplished through an enforcement order. *See* Response to Comments, at 26 (Comment 70). This is simply inaccurate. *See, e.g.*, Clairton Order, at 10; *Sierra Club v. EPA,* 536 F.3d 673, 677–78 (D.C. Cir. 2008). In fact, the Department has an

affirmative obligation to supplement the Renewal Permit with testing and monitoring requirements that assure continuous compliance with emission limits. *Id.*

In conclusion, the Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements for hourly and 12-month rolling PM, CO, and VOC emission limits for the Riley Boilers.

G. The Renewal Permit Does Not Establish Sufficient Monitoring and Testing Requirements to Assure Compliance with the PM Emission Limits for the Circulating Water Cooler Towers.

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

The Renewal Permit is deficient because its monitoring and testing requirements are insufficient to assure compliance with the PM hourly and annual emissions limits from the Circulating Water Cooler Towers. The Renewal Permit establishes hourly (lb/hour) and 12-month rolling emissions limits (tons/year, with a year "defined as any consecutive 12-month period") for PM – total PM (filterable) and PM10 and PM2.5 individually – from the Circulating Water Cooler Towers. Renewal Permit, at 115, Condition V.K.1(b). According to ACHD, these limits are derived from Article XXI Sections 2101.05.a.1 and 2103.12.a.2.B, which were incorporated into ACHD's EPA-approved SIP. *Id.*; 69 Fed. Reg. 52,831 (Aug. 30, 2004) (for Section 2103); 85 Fed. Reg. 19.668 (Apr. 8, 2020) (for Section 2101.05, which became part of the SIP effective Sept. 29, 2004).

The Renewal Permit requires the permittee to monitor for total dissolved solids ("TDS") of the recirculating water, but fails to establish any specific time frame or frequency at all for when this needs to occur. Renewal Permit, at 115, Condition V.K.3.

The Department failed to provide a clear rationale to describe how water monitoring for TDS without any required time frame for conducting the monitoring would allow the permittee

to monitor for PM emissions on an hourly basis or a 12-month rolling basis. The Technical Support Document likewise fails to provide a rationale, stating that the likelihood of violating the limits is low and the last three years' emissions inventory has been significantly lower than the limit, but failing to provide a clear rationale for how the monitoring and testing requirements with no specified frequency can assure compliance with hourly and 12-month rolling limits in the future. Technical Support Document, at 72.

The Renewal Permit's TDS monitoring provision is markedly weaker than the same condition in the Draft Permit, which established that this monitoring had to be performed at least once per month for the purpose of the emission inventory. Draft Permit, at 116, Condition V.K.3. The Draft Permit's monthly monitoring requirement was already too infrequent to assure compliance with hourly limits, but the Renewal Permit's monitoring requirements are significantly less able to assure compliance given that there is no time frame provided at all for when monitoring would have to occur. These requirements are not frequent enough to assure compliance with these sources' hourly or annual emissions limits for PM, and the failure to provide a frequency at all does not have a reasonable relationship to the hourly or annual averaging times required to determine compliance. Renewal Permit Conditions V.K.1(b). *See* 40 C.F.R. § 70.6(a)(3)(i)(B); Sierra Club, 536 F.3d at 676–77; NMWDA Order, at 9. As a result, these monitoring and testing requirements do not assure compliance with the circulating water cooler towers' hourly and annual emissions limits for PM.

The Renewal Permit does not identify any other testing or monitoring requirements for these requirements. Neither the Renewal Permit, Technical Review Memo, nor Response to Comments provide a reasoned explanation as to the permit's monitoring and testing requirements

are sufficient to assure compliance with the hourly and 12-month rolling PM limits for the circulating water cooling towers.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *In the Matter of Wheelabrator Baltimore, L.P.* (Wheelabrator Order), Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *In the Matter of United States Steel, Granite City Works* (Granite City I Order), Order on Petition No. V-2009-03 at 7-8 (January 31, 2011)

3. Inadequacy of Permit Term

The Renewal Permit's monitoring requirements for PM without a specified frequency for the circulating water cooling towers are too infrequent to assure compliance with these sources' hourly and 12-month rolling emissions limits for PM. Renewal Permit, at 115, Conditions V.K.1(b), V.K.3. Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. As noted previously, EPA has concluded that even annual testing alone is insufficient to assure compliance with an hourly limit. *See* discussion *supra* Section V.A.3.

Here, there is no time frame required at all for when monitoring is required, and this complete lack of a frequency requirement is clearly not sufficient to assure continuous compliance with short-term PM emission limits that must be met on hourly and 12-month rolling bases for the circulating water cooling towers. *Id.* The absence of any monitoring frequency is not reasonably related to the hourly or annual emissions limits for PM from this source. 40 CFR

§70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. The Department has also failed to provide a clear and documented rationale in the Renewal Permit, Response to Comments, or Technical Support Document that describes how the permit's monitoring provision of monitoring of TDS of recirculating water without any prescribed time frame or frequency assures continuous compliance with short-term hourly and 12-month rolling emission limits for PM from the circulating water cooling towers as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.h of their Comments, which stated the same points above. Ex. 1 at 35.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's TDS recirculating water monitoring and testing requirements assure compliance with the PM hourly and 12-month rolling emission limits from the circulating water cooling towers. The Department's response in full is: "[p]lease refer to response to comment #53 above." Response to Comments, at 27 (Comment 73). The Response to Comment 53, in turn, states:

> Because the cooling tower water is from the Monongahela River, TDS is not consistent and therefore it would be impractical to set a limit. The monitoring and work practice requirements contained in the permit and coupled with the proper operation and maintenance of the source will assure compliance with the permit limits.

Id. at 19 (Comment 53).

The Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment. The Department did not justify why it did not establish clear and more frequent monitoring or justify how these monitoring and testing requirements that only require monitoring of TDS in recirculating water without any specified frequency will assure compliance with hourly and 12-month rolling limits for future emissions. 40 C.F.R. § 70.7(a)(5). Title V

requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual testing alone is insufficient to assure compliance with an hourly limit. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9.

In conclusion, the Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements for hourly and 12-month rolling PM emission limits for the circulating water cooling towers.

H. The Renewal Permit's Testing and Monitoring Requirements of SO2 from Various Sources and the Facility as a Whole Do Not Assure Compliance with Its Hourly and Annual SO2 Emission Limitations.

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

The Renewal Permit is deficient because its monitoring and testing requirements are insufficient to assure compliance with the SO2 hourly and 12-month rolling emissions limits from the various sources: the Blast Furnaces, the Blast Furnace Stoves, the Blast Furnace Gas Flares, BOP shop, BOP Process (roof), and the Caster Tundish Preheaters. Renewal Permit Conditions V.A.1(m), (p), and (r); V.B.1(f); V.D.1.(l) and (n); and V.F.1(c).[7,8] The Site Level Terms and Conditions section of the Permit requires the Permittee to measure the H2S content of the blast furnace gas combusted at the facility at least once every calendar quarter. Renewal Permit Condition IV.31(b). This quarterly requirement has no reasonable relationship with the hourly or 12-month rolling emission limits for SO2 from any of the above-referenced sources and therefore does not assure compliance with those limits. The Renewal Permit also requires the permittee to perform SO2 stack tests on the Casthouse Baghouses once every two years,

[7] The SO2 limit in the Draft Permit at Condition V.C.1(d) was removed in final permit, so was not included here despite being in Petitioners' Comments.
[8] V.H.1(g) regarding the Riley Boilers was not included in this Petition despite being in Petitioners' Comments because SO2 CEMS are being installed on the Riley Boilers. Response to Comments, at 29 (Comment 74).

emissions tests for SO2 from the Blast Furnace Stoves once every two years, SO2 emissions tests on the BOP Shop venturi scrubber once every two years, and SO2 emission stack tests on the boilers once every two years. Renewal Permit, at 46 (Condition V.A.2(b) for the Casthouse Baghouses), 60 (Condition V.B.2.(a) (for the Blast Furnace Stoves), 60 (Condition V.D.2.(f) for the BOP Shop), and 104 (Condition V.H.2.(b) for the Boilers). The frequencies of these requirements are not reasonably related to the hourly or 12-month rolling emission limits in the Draft Permit. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); Sierra Club, 536 F.3d at 676-77; NMWDA Order, at 9. Therefore, the testing and monitoring requirements for SO2 emission limits for these sources are not sufficient to assure continuous compliance with SO2 permit limits.

According to ACHD, these limits are derived as follows:

- V.A.1(m): from ACHD Sections 2103.12.a.2.B and 2104.02.c.9.A, which were incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 44.

- V.A.1(p): from Permit No. 7035003-002-90107 issued February 18, 1993, and ACHD Article XXI Sections 2103.12.a.2.B and §2104.02.c.9.A, which were incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 45.

- V.A.1(r): from SO2 SIP IP 0051-I006, Condition V.A.1.c, and ACHD Article XXI Section 2105.21.h.4, which was incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 46.

- V.B.1(f): from SO2 SIP IP 0051-I006, Condition V.A.1.c), and ACHD Article XXI Sections 2102.04.b.6 and 2105.21.h.4, which were incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 59.

- V.D.1.(l): from ACHD Article XXI Sections 2103.12.a.2.B and 2104.02.c.9.B, which were incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 67.

- V.D.1(n): from ACHD Article XXI, 2103.12.a.2.B, which was incorporated into ACHD's EPA-approved SIP, and SO2 SIP IP 0051-I006, Condition V.A.1.c Table V-1-2. Renewal Permit, at 69.

- V.F.1(c): from Permit No. 7035003-002-93900, issued March 1, 1994, and ACHD Article XXI Sections 2101.05.a.1 and 2103.12.a.2.B, which were incorporated into ACHD's EPA-approved SIP. Renewal Permit, at 96.

- V.H.1(g): from ACHD Article XXI Sections 2103.12.a.2.B, 2102.04.b.5, 2104.02.a.3, 2104.03, and 2104.03.a.2.B, which were incorporated into ACHD's EPA-approved SIP, and SO2 SIP IP 0051-I006, Condition V.A.1.c. Renewal Permit, at 102–03.

The Renewal Permit's monitoring requirements are too infrequent to assure compliance with these sources' hourly and annual emissions limits SO2 and the required monitoring frequencies are not reasonably related to the hourly emissions limits for SO2 from this source. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); Sierra Club, 536 F.3d at 676–77; NMWDA Order, at 9. As a result, these monitoring and testing requirements do not assure compliance with the various sources' hourly and 12-month rolling emissions limits for SO2.

The Department failed to provide a clear rationale for why the permit did not require more frequent monitoring of SO2 from the Blast Furnace Stove Stacks, the Blast Furnace Casthouse Baghouse stacks, each of the BOP shop baghouse and Venturi Scrubber stacks to assure compliance with hourly and 12-month rolling limits, especially given that technology to achieve more frequent monitoring of SO2 is being installed for the Riley boilers, which are adding SO2 CEMS.. *See* Response to Comments, at 29 (Comment 74).

The Renewal Permit does not identify any other testing or monitoring requirements for these requirements. Neither the Renewal Permit, Technical Review Memo, nor Response to

Comments provide a reasoned explanation as to how the permit's monitoring and testing requirements are sufficient to assure compliance with the SO2 limits for these various sources.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); Wheelabrator Order, Permit No. 24-510-01886 at 10 (Apr. 14, 2010). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are "applicable requirements." 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); Granite City I Order, at 7–8.

3. Inadequacy of Permit Term

The Renewal Permit's quarterly and biennial emissions tests required for SO2 at these various sources are too infrequent to assure compliance with these sources' hourly and 12-month rolling emissions limits for SO2. Under Title V, the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. As noted previously, EPA has concluded that even annual testing alone is insufficient to assure compliance with an hourly limit. *See* discussion *supra* Section V.A.3.

Here, quarterly and biennial are not sufficient to assure continuous compliance with short-term emission limits that must be met on hourly and 12-month rolling bases for the SO2 emissions from various sources. 40 CFR §70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77. The Department has failed to provide a clear and documented rationale in the Renewal Permit, Response to Comments, or Technical Support Document that describes how quarterly or biennial

SO2 emissions tests assure continuous compliance with short-term emission limits for SO2 for these various sources as required by 40 C.F.R. § 70.7(a)(5).

4. Issued Raised in Public Comments

Petitioners expressly raised these issues in Comment 8.i of their Comments, which stated the same points above. Ex. 1 at 35–36.

5. Analysis of Department's Response

The Department's response to Petitioners' Comment does not explain how the Renewal Permit's monitoring and testing requirements assure compliance with hourly or 12-month rolling SO2 emissions limits from various sources. The Department's response in full is:

> The SO_2 emissions are based on Edgar Thomson SO_2 SIP Installation Permit 0051-I006, dated September 14, 2017, and it is part of the attainment demonstration for sulfur dioxide (SO_2). The Department believes that the testing and monitoring requirements contained in the permit with proper operating practices will assure compliance with the permit conditions. See the Technical Support Document for a detailed evaluation of monitoring requirements. The consent decree signed on December 16, 2022, requires the installation of SO_2 CEMS on the Riley Boilers. This requirement has been incorporated into the permit under condition V.H.6. See also the response to Comment #66 above.

Response to Comments, at 29 (Comment 74).

The Department's response is not consistent with the Clean Air Act or responsive to Petitioners' Comment, apart from the mention of the installation of SO2 CEMS on the Riley Boilers. The Department says it "believes that the testing and monitoring requirements" will assure compliance, but the Department did not explain how the existing requirements will assure compliance with hourly and annual limits for future SO2 emissions for various sources (other than the Riley Boilers). 40 C.F.R. § 70.7(a)(5). Title V requires that the frequency of testing and monitoring must be reasonably related to the emission limit's averaging time and, as discussed above, even annual testing alone is insufficient to assure compliance with an hourly limit. 40 C.F.R. § 70.6(a)(3)(i)(B); NWDA Order at 9.

In conclusion, the Renewal Permit is deficient because it does not include sufficient monitoring and testing requirements for hourly and annual SO2 emission limits for various sources.

I. The Renewal Permit Eliminates the HCl and Total HAP Emissions Limits from the Blast Furnaces and Casthouses Without Justification and Despite ACHD Stating in its Response to Comments from U.S. Steel that These Emissions Would Not Be Removed from the Permit.

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

The Renewal Permit eliminated the hourly (lb/hr) and 12-month rolling (tons/yr, with year "defined as any consecutive 12-month period") HCl and total HAP emissions limits for the blast furnaces and casthouses that were in the Draft Permit in Tables at V.A.1(m) and (p) without justification and despite ACHD stating in the Response to Comments from U.S. Steel that these emissions limits would not be removed from the permit. *See* Draft Permit, at 51–52. According to ACHD in the Draft Permit, the limits for the Blast Furnace No. 1 and Casthouse exhausting at the casthouse baghouse were derived from ACHD Article XXI Sections 2103.12.a.2.B and 2104.02.c.9.A, which were incorporated into ACHD's EPA-approved SIP. Draft Permit, at 51, Condition V.A.1(m). According to ACHD in the Draft Permit, the limits for the Blast Furnace No. 2 and Casthouse exhausting at the casthouse baghouse were derived from Permit No. 7035003002-90107 issued February 18, 1993; ACHD Article XXI Sections 2103.12.a.2.B and 2104.02.c.9.A, which were incorporated into ACHD's EPA-approved SIP; and SO_2 SIP IP 0051-I006, Condition V.A.1.c. Draft Permit, at 52, Condition V.A.1(p).

These HCl and total HAPs limits that were in the Draft Permit are applicable requirements according to ACHD's references in the Draft Permit and ACHD did not provide any rationale or evidence that these are not applicable requirements. As such, they need to be included in the Renewal Permit at Conditions V.A.1(m) and (p) and the permit should be

required to include monitoring and testing requirements sufficient to assure compliance with those limits.

2. Applicable Requirement or Part 70 Requirement Not Met

Title V operating permits such as the Renewal Permit must include all applicable requirements. 40 C.F.R. §70.6(a)(1). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are among the "applicable requirements." 40 C.F.R. § 70.2. Although the Draft Permit included hourly and 12-month rolling HCl and total HAPs emission limits from the blast furnaces and casthouses, these limits were not included in the Renewal Permit. These limits are applicable requirements that must be included in the Renewal Permit along with monitoring and testing requirements to assure compliance with all of those limits.

3. Inadequacy of Permit Term

The Permit fails to include the hourly or 12-month rolling HCl or total HAPs emission limits from the blast furnaces and casthouses that are identified and present in the Draft Permit. The Department did not meet the Clean Air Act requirements for providing a clear rationale for failing to include these applicable requirements in the Title V permit.

4. Issued Raised in Public Comments

Petitioners could not have raised this issue in comments as the Draft Permit expressly included hourly and annual limits for HCl and total HAPs at Condition V.A.1(m) and (p). Petitioners did comment on the insufficiency of the monitoring and testing for HCl from the blast furnaces and casthouses. Comments, at 29-31; Response to Comments, at 23-24 (Comment 66). U.S. Steel raised the issue of removing HCl and total HAPs and other pollutants from the Blast Furnaces and Casthouses in its comments, but ACHD expressly rejected this request. Response to Comments, at 8 (Responses to Comments 18 and 19).

5. Analysis of Department's Response

In the Response to Comments, the Department responded to U.S. Steel's request to eliminate limits for HCl and total HAPs, as well as the limits for the other pollutants listed in the Draft Permit at Table V-A-1, by responding: "The Department agrees that the baghouse is not designed to control gaseous emissions, however, the gaseous emissions are part of the process emissions that exit through the baghouse stack. Therefore, the emissions remain unchanged." Response to Comments at 9 (Response to Comment 18; *see also* Response to Comment 19). Despite the Department's response that the emissions remain unchanged, the final Renewal Permit did eliminate the emissions limits, both hourly and annual, for HCl and total HAPs that had previously been on that chart in the Draft Permit. The Department failed to provide any rationale for eliminating these emission limits. EPA should object to the permit to ensure that the Renewal Permit is required to include these applicable limits and include sufficient monitoring and testing requirements to assure compliance with these limits.

J. The Renewal Permit Eliminates All of the Hourly and Annual Limits on PM, PM2.5, PM10, NOx, CO, and SO2 from the Blast Furnace Gas Flares Without Justification.

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

The Renewal Permit eliminated hourly (lb/hr) and 12-month rolling (tons/yr, with year defined as any consecutive 12-month period) annual limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the Blast Furnace Gas ("BFG") Flares that were present in the Draft Permit at Table V-C-1. *See* Draft Permit, at 65, Condition V.C.1(d).

According to ACHD in the Draft Permit, these limits for the BFG Flares No. 1 were derived from ACHD Article XXI Sections 2104.03.a.2.B, 2104.02.b, and 2103.12.a.2.B, which were incorporated into ACHD's EPA-approved SIP. Draft Permit, at 65, Condition V.C.1(d). As such, they are applicable limits according to ACHD, and ACHD did not include any statement in the Renewal Permit, Technical Support Document, or Response to Comments

stating that these were not applicable requirements. These HCl and total HAPs limits that were in the Draft Permit are therefore required to be included in the Renewal Permit and the permit should be required to include monitoring and testing requirements sufficient to assure compliance with those hourly and 12-month rolling limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the BFG Flares that had been in the Draft Permit at Table V-C-1, which were eliminated from the Renewal Permit. *See* Draft Permit, at 65.

2. Applicable Requirement or Part 70 Requirement Not Met

Title V operating permits such as the Renewal Permit must include all applicable requirements. 40 C.F.R. §70.6(a)(1). Requirements of a federally enforceable SIP that are incorporated into a Title V permit are among the requirements that are "applicable requirements." 40 C.F.R. § 70.2. Although the Draft Permit included hourly and 12-month rolling limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the BFG Flares, these limits were not included in the Renewal Permit. These are applicable requirements that limits must be included in the Renewal Permit along with monitoring and testing requirements to assure compliance with all of those limits. *See* Draft Permit, at 65, Condition V.C.1(d).

3. Inadequacy of Permit Term

The Permit fails to include the hourly or 12-month rolling limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the BFG Flares that are identified and present in the Draft Permit. The Department did not meet the Clean Air Act requirements for providing a clear rationale for failing to include these applicable requirements in the Title V permit.

4. Issued Raised in Public Comments

Petitioners could not have raised this issue in comments as the Draft Permit expressly included hourly and annual limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the Blast Furnace Gas Flares ("BFG") at Table V-C-1. *See* Draft Permit, at 65. Petitioners did comment on

the inadequacy of the monitoring and testing requirements for all of these pollutants from the BFG. Comments, at 31–32; Response to Comments, at 24 (Comment 68). Petitioners also did comment that the Department needed to clarify the emission limitations for the Blast Furnace Gas Flare. Comments, at 12; Response to Comments, at 20 (Comment 59). U.S. Steel raised the issue of removing these limits for the BFG in its comments on the basis that it is "inappropriate to limit what the facility can flare" and because RACT IP8a requires a flare minimization plan, to which the Department stated only that "[t]he Department made the requested change." Response to Comments, at 10 (Response to Comment 26).

5. Analysis of Department's Response

In the Response to Comments, the Department granted U.S. Steel's requested to eliminate limits at Table V.C.1 entirely. Response to Comments, at 10 (Response to Comment 26). The final Renewal Permit did eliminate the entire chart and all of the emissions limits it contained, both hourly and 12-month rolling, for PM, PM2.5, PM10, NOx, CO, and SO2 from the BFG Flares that had previously been on Table V-C-1 in the Draft Permit.

The Department failed to provide a clear rationale for eliminating these emission limits, which are applicable requirements according to ACHD's citations in the Draft Permit. U.S. Steel's comment was to request the removal of those BFG Flare limits because: the BFG Flare "is designed to function as a safety device, and it is inappropriate to limit what the facility can flare"; and because "[r]ecently, ACHD issued RACT IP8a, which included the requirement to maintain and operate the BFG flare according to a flare minimization plan." Response to Comments, at 10 (Comment 26). The Department accepted this comment without providing additional commentary or discussion. The existence of a flare minimization plan whose terms are not incorporated into the Title V permit (and which ACHD did not even mention in the permit documents as containing applicable requirements or applicable monitoring provisions) does not

negate the Clean Air Act requirement that all applicable requirements are required to be included into the permit, either as a general matter or specifically with regard to the elimination and displacement of the hourly and 12-monthrolling limits for PM, PM2.5, PM10, NOx, CO, and SO2 from the BFG Flares that are applicable requirements and were included in the Draft Permit. These limits, and monitoring requirements sufficient to assure compliance with these limits, need to be included in the permit.

EPA should object to the permit to ensure that the Renewal Permit is required to include these limits and include sufficient monitoring and testing requirements to assure compliance with these limits.

VI. CONCLUSION

For the foregoing reasons, and as explained in Petitioners' timely-filed public comments, the Renewal Permit is deficient. The Department's Response to Comments also failed to address Petitioners' significant comments. Accordingly, the Clean Air Act and EPA's 40 C.F.R. Part 70 rules require that the Administrator object to the Renewal Permit.

Respectfully submitted this 26th day of September, 2023 on behalf of the Environmental Integrity Project, Clean Air Council, and PennFuture,

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