BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Petition No. III-2023-15

In the Matter of

United States Steel Corporation, Edgar Thomson Plant

Permit No. 0051-OP23

Issued by the Allegheny County Health Department

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ORDER GRANTING A PETITION FOR OBJECTION TO A TITLE V OPERATING PERMIT

I. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) received a petition dated September 26, 2023 (the Petition) from the Environmental Integrity Project, Clean Air Council, and PennFuture (the Petitioners), pursuant to section 505(b)(2) of the Clean Air Act (CAA or Act), 42 United States Code (U.S.C.) § 7661d(b)(2). The Petition requests that the EPA Administrator object to operating permit No. 0051-OP23 (the Permit) issued by the Allegheny County Health Department (ACHD or the County) to the U.S. Steel Corporation's Mon Valley Works Edgar Thomson Plant (Edgar Thomson Plant) in Allegheny County, Pennsylvania. The operating permit was issued pursuant to title V of the CAA, 42 U.S.C. §§ 7661–7661f, and Article XXI § 2103.01 et seq. of ACHD's Rules and Regulations. *See also* 40 Code of Federal Regulations (C.F.R.) part 70 (title V implementing regulations). This type of operating permit is also known as a title V permit or part 70 permit.

Based on a review of the Petition and other relevant materials, including the Permit, the permit record, and relevant statutory and regulatory authorities, and as explained in Section IV of this Order, the EPA grants all claims in the Petition requesting that the EPA Administrator object to the Permit.

II. STATUTORY AND REGULATORY FRAMEWORK

A. Title V Permits

Section 502(d)(1) of the CAA, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to the EPA an operating permit program to meet the requirements of title V of the CAA and the EPA's implementing regulations at 40 C.F.R. part 70. The Commonwealth of Pennsylvania submitted a title V program governing the issuance of operating permits on behalf of Allegheny County in 1998 and amended the submitted program in 2001. The EPA granted full approval of Allegheny County's title V operating permit program in 2001. 66 Fed. Reg. 55112–15 (Nov. 1, 2001). This program, which became

effective on December 17, 2001, is codified in Article XXI § 2103.01 *et seq.* of ACHD's Rules and Regulations.

All major stationary sources of air pollution and certain other sources are required to apply for and operate in accordance with title V operating permits that include emission limitations and other conditions as necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable implementation plan. 42 U.S.C. §§ 7661a(a), 7661b, 7661c(a). The title V operating permit program generally does not impose new substantive air quality control requirements, but does require permits to contain adequate monitoring, recordkeeping, reporting, and other requirements to assure compliance with applicable requirements. 40 C.F.R. § 70.1(b); 42 U.S.C. § 7661c(c). One purpose of the title V 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." 57 Fed. Reg. 32250, 32251 (July 21, 1992). Thus, the title V operating permit program is a vehicle for compiling the air quality control requirements as they apply to the source's emission units and for providing adequate monitoring, recordkeeping, and reporting to assure compliance with such requirements.

B. Review of Issues in a Petition

State and local permitting authorities issue title V permits pursuant to their EPA-approved title V programs. Under CAA § 505(a) and the relevant implementing regulations found at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to the EPA for review. 42 U.S.C. § 7661d(a). Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the proposed permit if the EPA determines that the proposed permit is not in compliance with applicable requirements under the Act. 42 U.S.C. § 7661d(b)(1); *see also* 40 C.F.R. § 70.8(c). If the EPA does not object to a permit on its own initiative, any person may, within 60 days of the expiration of the EPA's 45-day review period, petition the Administrator to object to the permit. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d).

Each petition must identify the proposed permit on which the petition is based and identify the petition claims. 40 C.F.R. § 70.12(a). Any issue raised in the petition as grounds for an objection must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements or requirements under part 70. 40 C.F.R. § 70.12(a)(2). Any arguments or claims the petitioner wishes the EPA to consider in support of each issue raised must generally be contained within the body of the petition.[1] *Id.*

The petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting authority (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period). 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d); *see also* 40 C.F.R. § 70.12(a)(2)(v).

[1] If reference is made to an attached document, the body of the petition must provide a specific citation to the referenced information, along with a description of how that information supports the claim. In determining whether to object, the Administrator will not consider arguments, assertions, claims, or other information incorporated into the petition by reference. *Id*.

In response to such a petition, the Act requires the Administrator to issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the Act. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1).[2] Under section 505(b)(2) of the Act, the burden is on the petitioner to make the required demonstration to the EPA.[3] The petitioner's demonstration burden is a critical component of CAA § 505(b)(2). As courts have recognized, CAA § 505(b)(2) contains both a "discretionary component," under which the Administrator determines whether a petition demonstrates that a permit is not in compliance with the requirements of the Act, and a nondiscretionary duty on the Administrator's part to object where such a demonstration is made. *Sierra Club v. Johnson*, 541 F.3d at 1265–66 ("[I]t is undeniable [that CAA § 505(b)(2)] also contains a discretionary component: it requires the Administrator to make a judgment of whether a petition demonstrates a permit does not comply with clean air requirements."); *NYPIRG*, 321 F.3d at 333. Courts have also made clear that the Administrator is only obligated to grant a petition to object under CAA § 505(b)(2) if the Administrator determines that the petitioner has demonstrated that the permit is not in compliance with requirements of the Act. *Citizens Against Ruining the Environment*, 535 F.3d at 677 (stating that § 505(b)(2) "clearly obligates the Administrator to (1) determine whether the petition demonstrates noncompliance and (2) object *if* such a demonstration is made" (emphasis added)).[4] When courts have reviewed the EPA's interpretation of the ambiguous term "demonstrates" and its determination as to whether the demonstration has been made, they have applied a deferential standard of review. *See, e.g.*, *MacClarence*, 596 F.3d at 1130–31.[5] Certain aspects of the petitioner's demonstration burden are discussed in the following paragraph. A more detailed discussion can be found in the preamble to the EPA's proposed petitions rule. *See* 81 Fed. Reg. 57822, 57829–31 (Aug. 24, 2016); *see also In the Matter of Consolidated Environmental Management, Inc., Nucor Steel Louisiana*, Order on Petition Nos. VI-2011-06 and VI-2012-07 at 4–7 (June 19, 2013) (*Nucor II Order*).

The EPA considers a number of criteria in determining whether a petitioner has demonstrated noncompliance with the Act. *See generally Nucor II Order* at 7. For example, one such criterion is whether a petitioner has provided the relevant analyses and citations to support its claims. For each claim, the petitioner must identify (1) the specific grounds for an objection, citing to a specific permit term or condition where applicable; (2) the applicable requirement as defined in 40 C.F.R. § 70.2, or requirement under part 70, that is not met; and (3) an explanation of how the term or condition in the permit, or relevant portion of the permit record or permit process, is not adequate to comply with the corresponding applicable requirement or requirement under part 70. 40 C.F.R. § 70.12(a)(2)(i)–(iii). If a petitioner does not identify these elements, the EPA is left to work out the basis for the petitioner's objection, contrary to Congress's express allocation of the burden of demonstration to the petitioner in CAA § 505(b)(2). *See MacClarence*, 596 F.3d at 1131 ("[T]he Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and

[2] *See also New York Public Interest Research Group, Inc. v. Whitman*, 321 F.3d 316, 333 n.11 (2d Cir. 2003) (*NYPIRG*).
[3] *WildEarth Guardians v. EPA*, 728 F.3d 1075, 1081–82 (10th Cir. 2013); *MacClarence v. EPA*, 596 F.3d 1123, 1130–33 (9th Cir. 2010); *Sierra Club v. EPA*, 557 F.3d 401, 405–07 (6th Cir. 2009); *Sierra Club v. Johnson*, 541 F.3d 1257, 1266–67 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677–78 (7th Cir. 2008); *cf. NYPIRG*, 321 F.3d at 333 n.11.
[4] *See also Sierra Club v. Johnson*, 541 F.3d at 1265 ("Congress's use of the word 'shall' . . . plainly mandates an objection *whenever* a petitioner demonstrates noncompliance." (emphasis added)).
[5] See also Sierra Club v. Johnson, 541 F.3d at 1265–66; Citizens Against Ruining the Environment, 535 F.3d at 678.

persuasive.").[6] Relatedly, the EPA has pointed out in numerous previous orders that general assertions or allegations did not meet the demonstration standard. *See, e.g.*, *In the Matter of Luminant Generation Co., Sandow 5 Generating Plant*, Order on Petition Number VI-2011-05 at 9 (Jan. 15, 2013).[7] Also, the failure to address a key element of a particular issue presents further grounds for the EPA to determine that a petitioner has not demonstrated a flaw in the permit. *See, e.g.*, *In the Matter of EME Homer City Generation LP and First Energy Generation Corp.*, Order on Petition Nos. III-2012-06, III-2012-07, and III-2013-02 at 48 (July 30, 2014).[8]

Another factor the EPA examines is whether the petitioner has addressed the state or local permitting authority's decision and reasoning contained in the permit record. 81 Fed. Reg. at 57832; *see Voigt v. EPA*, 46 F.4th 895, 901–02 (8th Cir. 2022); *MacClarence*, 596 F.3d at 1132–33.[9] This includes a requirement that petitioners address the permitting authority's final decision and final reasoning (including the state's response to comments) where these documents were available during the timeframe for filing the petition. 40 C.F.R. § 70.12(a)(2)(vi). Specifically, the petition must identify where the permitting authority responded to the public comment and explain how the permitting authority's response is inadequate to address (or does not address) the issue raised in the public comment. *Id*.

The information that the EPA considers in determining whether to grant or deny a petition submitted under 40 C.F.R. § 70.8(d) generally includes, but is not limited to, the administrative record for the proposed permit and the petition, including attachments to the petition. 40 C.F.R. § 70.13. The administrative record for a particular proposed permit includes the draft and proposed permits; any permit applications that relate to the draft or proposed permits; the statement required by § 70.7(a)(5) (sometimes referred to as the "statement of basis"); any comments the permitting authority received during the public participation process on the draft permit; the permitting authority's written responses to comments, including responses to all significant comments raised during the public participation process on the draft permit; and all materials available to the permitting authority that are relevant to the permitting decision and that the permitting authority made available to the public according to § 70.7(h)(2). *Id.* If a final permit and a statement of basis for the final permit are available

[6] *See also In the Matter of Murphy Oil USA, Inc.*, Order on Petition No. VI-2011-02 at 12 (Sept. 21, 2011) (denying a title V petition claim where petitioners did not cite any specific applicable requirement that lacked required monitoring); *In the Matter of Portland Generating Station*, Order on Petition at 7 (June 20, 2007) (*Portland Generating Station Order*).

[7] *See also Portland Generating Station Order* at 7 ("[C]onclusory statements alone are insufficient to establish the applicability of [an applicable requirement]."); *In the Matter of BP Exploration (Alaska) Inc., Gathering Center #1*, Order on Petition Number VII-2004-02 at 8 (Apr. 20, 2007); *In the Matter of Georgia Power Company*, Order on Petitions at 9–13 (Jan. 8, 2007) (*Georgia Power Plants Order*); *In the Matter of Chevron Products Co., Richmond, Calif. Facility*, Order on Petition No. IX-2004–10 at 12, 24 (Mar. 15, 2005).

[8] *See also In the Matter of Hu Honua Bioenergy*, Order on Petition No. IX-2011-1 at 19–20 (Feb. 7, 2014); *Georgia Power Plants Order* at 10.

[9] *See also, e.g.*, *Finger Lakes Zero Waste Coalition v. EPA*, 734 Fed. App'x *11, *15 (2d Cir. 2018) (summary order); *In the Matter of Noranda Alumina, LLC*, Order on Petition No. VI-2011-04 at 20–21 (Dec. 14, 2012) (denying a title V petition issue where petitioners did not respond to the state's explanation in response to comments or explain why the state erred or why the permit was deficient); *In the Matter of Kentucky Syngas, LLC*, Order on Petition No. IV-2010-9 at 41 (June 22, 2012) (denying a title V petition issue where petitioners did not acknowledge or reply to the state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient); *Georgia Power Plants Order* at 9–13 (denying a title V petition issue where petitioners did not address a potential defense that the state had pointed out in the response to comments).

during the agency's review of a petition on a proposed permit, those documents may also be considered when determining whether to grant or deny the petition. *Id*.

If the EPA grants a title V petition, a permitting authority may address the EPA's objection by, among other things, providing the EPA with a revised permit. 42 U.S.C. § 7661d(b)(3), (c); 40 C.F.R. § 70.8(d); *see id*. § 70.7(g)(4); 70.8(c)(4); *see generally* 81 Fed. Reg. at 57842 (describing post-petition procedures); *Nucor II Order* at 14–15 (same). In some cases, the permitting authority's response to an EPA objection may not involve a revision to the permit terms and conditions themselves, but may instead involve revisions to the permit record. For example, when the EPA has issued a title V objection on the ground that the permit record does not adequately support the permitting decision, it may be acceptable for the permitting authority to respond only by providing an additional rationale to support its permitting decision.

When the permitting authority revises a permit or permit record in order to resolve an EPA objection, it must go through the appropriate procedures for that revision. If a final permit has been issued prior to the EPA's objection, the permitting authority should determine whether its response to the EPA's objection requires a minor modification or a significant modification to the title V permit, as described in 40 C.F.R. § 70.7(e)(2) and (4) or the corresponding regulations in the state's EPA-approved title V program. If the permitting authority determines that the revision is a significant modification, then the permitting authority must provide for notice and opportunity for public comment for the significant modification consistent with 40 C.F.R. § 70.7(h) or the state's corresponding regulations.

In any case, whether the permitting authority submits revised permit terms, a revised permit record, or other revisions to the permit, and regardless of the procedures used to make such revision, the permitting authority's response is generally treated as a new proposed permit for purposes of CAA § 505(b) and 40 C.F.R. § 70.8(c) and (d). *See Nucor II Order* at 14. As such, it would be subject to the EPA's 45-day review per CAA § 505(b)(1) and 40 C.F.R. § 70.8(c), and an opportunity for the public to petition under CAA § 505(b)(2) and 40 C.F.R. § 70.8(d) if the EPA does not object during its 45-day review period.

When a permitting authority responds to an EPA objection, it may choose to do so by modifying the permit terms or conditions or the permit record with respect to the specific deficiencies that the EPA identified; permitting authorities need not address elements of the permit or the permit record that are unrelated to the EPA's objection. As described in various title V petition orders, the scope of the EPA's review (and accordingly, the appropriate scope of a petition) on such a response would be limited to the specific permit terms or conditions or elements of the permit record modified in that permit action. *See In the Matter of Hu Honua Bioenergy, LLC*, Order on Petition No. VI-2014-10 at 38–40 (Sept. 14, 2016); *In the Matter of WPSC, Weston*, Order on Petition No. V-2006-4 at 5–6, 10 (Dec. 19, 2007).

III. BACKGROUND

A. The U.S. Steel Edgar Thomson Plant

The Edgar Thomson Plant is located in Braddock, southeast of Pittsburgh, in Allegheny County, Pennsylvania. The facility has produced steel since 1875 and has been owned by the U.S. Steel

Corporation since 1901. The facility primarily produces steel slabs from raw materials such as coke, iron-bearing materials, and fluxes. Emission units at the facility include blast furnaces and stoves for iron making; a Basic Oxygen Process (BOP) shop for steel making; casting operations; three Riley Boilers for supplying steam, heat, and electricity; water cooling towers; and other units not relevant to the Petition. Emission units at the facility variously combust blast furnace gas, coke oven gas, and natural gas. The Edgar Thomson Plant is a major source of particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen oxides (NO_X), volatile organic compounds (VOC), and Hazardous Air Pollutants (HAP). In addition to title V, the plant is subject to various ACHD rules and regulations (part of Pennsylvania's State Implementation Plan, or SIP), National Emission Standards for Hazardous Air Pollutants, New Source Performance Standards, and other requirements.

The EPA used EJScreen[10] to review key demographic and environmental indicators within a five-kilometer radius of the Edgar Thomson Plant. This review showed a total population of approximately 90,614 residents within a five-kilometer radius of the facility, of which approximately 35 percent are people of color and 39 percent are low income. In addition, the EPA reviewed the EJScreen Environmental Justice Indices, which combine certain demographic indicators with 13 environmental indicators. The following table identifies the Environmental Justice Indices for the five-kilometer radius surrounding the facility and their associated percentiles when compared to the rest of the Commonwealth of Pennsylvania.

EJ Index	Percentile in State
Particulate Matter 2.5	90
Ozone	77
Diesel Particulate Matter	81
Air Toxics Cancer Risk	96
Air Toxics Respiratory Hazard	78
Toxic Releases to Air	89
Traffic Proximity	76
Lead Paint	81
Superfund Proximity	45
RMP Facility Proximity	72
Hazardous Waste Proximity	82
Underground Storage Tanks	76
Wastewater Discharge	80

B. Permitting History

U.S. Steel first obtained a title V permit for the Edgar Thomson Plant in 2016. On October 13, 2020, U.S. Steel applied for a title V permit renewal. ACHD published notice of a Draft Permit on May 25, 2022, subject to a public comment period that ran until June 30, 2022. On June 14, 2023, ACHD submitted a Proposed Permit, along with a Technical Support Document (TSD) and its responses to public

[10] EJScreen is an environmental justice mapping and screening tool that provides the EPA with a nationally consistent dataset and approach for combining environmental and demographic indicators. *See https://www.epa.gov/ejscreen/what-ejscreen*.

comments (RTC),[11] to the EPA for its 45-day review. The EPA's website indicated that the EPA's 45-day review period ended on July 28, 2023, during which time the EPA did not object to the Proposed Permit. ACHD issued the Final Permit for the Edgar Thomson Plant on August 1, 2023.

C. Timeliness of Petition

Pursuant to the CAA, if the EPA does not object to a proposed permit during its 45-day review period, any person may petition the Administrator within 60 days after the expiration of the 45-day review period to object. 42 U.S.C § 7661d(b)(2). The EPA's website indicated that the EPA's 45-day review period expired on July 28, 2023. Thus, any petition seeking the EPA's objection to the Proposed Permit was due on or before September 26, 2023. The Petition was dated and received on September 26, 2023, and, therefore, the EPA finds that the Petitioners timely filed the Petition.

IV. DETERMINATIONS ON CLAIMS RAISED BY THE PETITIONERS

The Petition contains ten separate claims, labeled Claims A through J. Several of the claims feature substantially overlapping issues, while other claims present more unique issues. This Order first addresses the claims with substantial overlap together (Claims A, B, D, and F) before addressing the remaining claims in the order presented in the Petition.

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

Petition Claim: The Petitioners claim that the Permit is deficient because it does not include sufficient monitoring and testing requirements to assure compliance with hourly and rolling 12-month emission limits on NO_x, CO, VOC, or PM (condensable) from the Blast Furnaces and Casthouses. Petition at 8.[12] *See* Petition at 7–15.

The Petitioners observe that the Permit imposes hourly and rolling 12-month emission limits on NO_x, CO, VOC, and condensable PM (among other pollutants) from the facility's Blast Furnaces and Casthouses. *Id*. at 8 (citing Permit Conditions V.A.1.m and p). The Petitioners further observe that the facility is only required to conduct NO_x, CO, and SO_2 tests every two years and VOC tests every four years. *Id*. at 8–9 (citing Permit Conditions V.A.2.b, c, and d).

The Petitioners claim that this testing is too infrequent, and that neither the Permit nor permit record provides a reasoned explanation for how two-year or four-year stack testing is sufficient to assure continuous compliance with the relevant applicable hourly and rolling 12-month limits. *Id*. at 9, 10, 13. For support, the Petitioners cite a variety of legal authorities related to determining the sufficiency and frequency of monitoring in title V permits. The Petitioners note that both the statute and regulations

[11] A copy of the TSD and RTC, as provided to EPA along with the Proposed Permit, is included as Petition Exhibits 2 and 3. Citations to the TSD and RTC throughout this Order refer to the pagination of the original documents, not the Petition exhibits.

[12] The Petitioners assert that the same arguments would also apply to hydrogen chloride (HCl) emissions from these units, but the relevant HCl emission limits were removed from the Permit. Petition at 8 n.3. Claim I addresses the removal of these HCl limits.

require that each title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements, and they assert that "the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit." *Id*. at 10 (citing 42 U.S.C. § 7661c(a) and (b); 40 C.F.R. § 70.6(a)(3)(i)(B)). The Petitioners state that the U.S. Court of Appeals for the D.C. Circuit noted that annual testing is unlikely to assure compliance with a daily emission limit, and the EPA has reached a similar conclusion in a prior title V petition order. *Id*. at 11–12 (citing *Sierra Club v. EPA,* 536 F.3d 673, 675–77 (D.C. Cir. 2008); *In the Matter of Northeast Maryland Waste Disposal Authority, Montgomery County Resource Recovery Facility,* Order on Petition No. III-2019-2 at 9 (Dec. 11, 2020) (*MCRRF Order*)). The Petitioners also assert that the rationale for selected monitoring requirements must be clear and documented in the permit record. *Id*. at 12 (citing 40 C.F.R. § 70.7(a)(5) and several title V petition orders).

The Petitioners challenge ACHD's justification for the Permit's monitoring requirements, as reflected in the RTC and TSD. For example, with respect to PM, the Petitioners acknowledge ACHD's statement in its RTC that actual PM emissions reported in 2021 were 0.03 tons/year, that PM emissions reported in the source's emissions inventory for the last few years were lower than the limit, and that the likelihood of the source violating the PM limit is very low. *Id*. at 14 (citing RTC at 23; TSD at 66–67). The Petitioners contend that neither these nor other statements from ACHD are "relevant to the legal standard under the Clean Air Act, cure[] the insufficient testing and monitoring provisions, or address[] Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance." *Id*. Moreover, the Petitioners assert that 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." *Id*. The Petitioners allege that ACHD's analyses for NO_x, CO, and VOC similarly lack justification regarding how the monitoring requirements assure compliance. *Id*.

The Petitioners also claim that requirements related to inspection and operation of Continuous Parametric Monitoring Systems (CPMS) for the Casthouse emission control system baghouse do not remedy the deficient monitoring, testing, and reporting requirements for NO_x, CO, VOC, or PM (condensable). *Id*. at 9 (citing Permit Conditions V.A.3.d–i). The Petitioners state that baghouses are primarily designed to control filterable PM emissions, and that ACHD did not explain how CPMS requirements for the baghouse will assure compliance with limits on these other pollutants challenged in this Claim. *Id*. at 9–10, 14–15.

Claim B: The Petitioners Claim That "The Renewal Permit Does Not Include Sufficient Monitoring and Testing Requirements for PM (filterable), PM (condensable), PM_{10}, $PM_{2.5}$, NO_x, CO, or VOC Emissions from the Blast Furnace Stoves."

Petition Claim: Claim B is similar to Claim A, in that it primarily challenges whether permit requirements to conduct stack tests either every two years or every four years are sufficient to assure continuous compliance with hourly and rolling 12-month emission limits. *See* Petition at 16–21.

Claim B involves hourly and rolling 12-month emission limits on PM (filterable), PM (condensable), PM_{10}, $PM_{2.5}$, NO_x, CO, and VOC from the facility's Blast Furnace Stoves. *Id*. at 16 (citing Permit

Condition V.B.1.e).[13] The Petitioners observe that the Permit requires testing of VOC emissions every four years and of the other listed pollutants every two years. *Id*. at 16–17 (citing Permit Condition V.B.2.a).

The Petitioners challenge the sufficiency of these stack testing requirements for reasons nearly identical to those presented in Claim A: "the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit." *Id*. at 18; *see id*. at 17–21.

Additionally, the Petitioners challenge ACHD's reliance on recording and maintaining fuel consumption data and the County's statement 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." *Id*. at 20 (quoting TSD at 67). Specifically, the Petitioners assert that ACHD "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," or how the fuel consumption recordkeeping requirements "taken together with the biennial or quadrennial testing" are sufficient to demonstrate compliance with emissions limits. *Id*. at 20–21. Again, the Petitioners claim that neither this explanation about fuel consumption nor any other of ACHD's justifications are "relevant to the legal standard under the Clean Air Act, cure[] the insufficient testing and monitoring provisions, or address[] Petitioners' comments regarding the inadequacy of the monitoring requirements to assure compliance." *Id*.

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

Petition Claim: Claim D is similar to Claims A and B, in that it primarily challenges whether permit requirements to conduct stack tests either every two years or every five years are sufficient to assure continuous compliance with hourly and rolling 12-month emission limits. *See* Petition at 25–30.

Claim D involves hourly and rolling 12-month emission limits on NO_x, CO, and VOC from various units associated with the BOP Shop. *See id*. at 25–26. The Petitioners observe that the Permit establishes hourly and rolling 12-month limits on NO_x, CO, and VOC from the BOP Shop itself, and also subjects the BOP Secondary Emission Control System and the BOP Mixer and Desulfurization process to hourly and rolling 12-month emission limits on VOC. *Id*. (citing Permit Conditions V.D.1.l, m, and p). The Petitioners further observe that the Permit requires stack testing every two years for the BOP Shop venturi scrubber, and every five years for the BOP Mixer and Desulfurization baghouse. *Id*. at 26 (citing Permit Conditions V.D.2.c, f).[14]

The Petitioners argue that these monitoring requirements are not frequent enough for reasons nearly identical to those presented in Claims A and B: "the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit." *Id*. at 28.

[13] The Petitioners assert that the same arguments would also apply to HCl and HAP emissions from these units, but the relevant HCl and HAP emission limits were removed from the Permit. Petition at 16 n.5. Claim I addresses the removal of these HCl and HAP limits.

[14] The Petitioners also allege that neither the Permit nor permit record specify whether any testing or monitoring requirements are applicable to emissions from Stacks S007 and S008. *Id*.

Additionally, similar to Claim A, the Petitioners acknowledge permit requirements related to monitoring of baghouses and a venturi scrubber, which are primarily PM control devices. *Id*. at 26–27. The Petitioners argue that the permit record does not explain how these requirements are related to NO_x, CO, and VOC emissions. *Id*. at 27.

The Petitioners also challenge ACHD's justification for these permit terms. In addition to the Petitioners' general rebuttals (as summarized with respect to Claim A), *see id*. at 29, the Petitioners allege (mistakenly)[15] that ACHD has taken the position that it cannot impose continuous emission monitoring systems (CEMS) without an enforcement order. *Id*. at 28–29. The Petitioners assert that the EPA recently rejected this line of reasoning, stating (among other things) that "[n]othing 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." *Id*. at 30 (quoting *In the Matter of U.S. Steel Corp., Clairton Coke Works*, Order on Petition Nos. III-2023-5 & III-2023-6 at 10 (Sept. 18, 2023) (*U.S. Steel Clairton Order*)).

Claim F: The Petitioners Claim That "The Renewal Permit Does Not Establish Sufficient Monitoring and Testing Requirements to Assure Compliance with the PM, CO, or VOC Hourly and Annual Emission Limits from the Three Riley Boilers."

Petition Claim: Claim F is similar to Claims A, B, and D, in that it primarily challenges whether permit requirements to conduct stack tests every two or four years are sufficient to assure continuous compliance with hourly and rolling 12-month emission limits. *See* Petition at 34–38.

Claim F involves hourly and rolling 12-month emission limits on PM, CO, and VOC from the three Riley Boilers. *Id*. at 34 (citing Permit Condition V.H.1.g). The Petitioners observe that the Permit requires stack testing every two years for PM and every four years for CO and VOC. *Id*. at 34–35 (citing Permit Conditions V.H.2.a, d).

The Petitioners argue that these monitoring requirements are not frequent enough for reasons nearly identical to those presented in Claims A, B, and D: "the frequency of monitoring must be reasonably related to the averaging time to determine compliance with a limit." *Id*. at 36; *see id*. at 34–36.

Additionally, the Petitioners acknowledge requirements related to monitoring of visible emissions on a weekly or monthly basis. *Id*. at 35 (citing Permit Condition V.H.3.f). The Petitioners argue visible emissions monitoring cannot reliably measure CO, VOC, PM (filterable), or PM10 (filterable), and that even if it could, the frequency is not reasonably related to the hourly emission limits. *Id*. at 35, 36.

The Petitioners also challenge ACHD's justification for these permit terms. In addition to the Petitioners' general rebuttals (as summarized with respect to Claim A), *see id*. at 37, the Petitioners challenge ACHD's position that more frequent monitoring is not necessary given low previous emissions. *Id*. at 37. The Petitioners again argue that "previous low emission measurements are not relevant to potential future emissions." *Id*. Similar to Claim D, the Petitioners also contest what they

[15] The EPA observes that the Petitioners misquote ACHD's RTC, which does not contain any discussion about ACHD's inability to impose CEMS without an enforcement order. *See* RTC at 25 (response to comment #70).

(mistakenly)[16] characterize as ACHD's position that the agency cannot impose CEMS without an enforcement order. *See id*. at 37–38.

EPA Response to Claims A, B, D, and F: For the following reasons, the EPA grants the Petitioners' request for an objection on these claims.

Claims A, B, D, and F raise similar issues involving similar fact patterns. In all of these claims, the Petitioners challenge the sufficiency of periodic stack tests (every two years, four years, or five years) to assure compliance with emission limits that apply on a much shorter time period (hourly and any consecutive 12-month period). The Petitioners also challenge the sufficiency of ongoing monitoring and recordkeeping that occurs in between stack tests.

The various emission limits and testing requirements addressed in Claims A, B, D, and F are summarized in the following table:[17]

Claim	Emission Unit	Limit Conditions	Hourly & 12-mo. Limits	Testing Frequency	Testing Conditions
A	Blast Furnaces 1 & 3 and Casthouses	V.A.1.m V.A.1.p	PM (condensable)	2 years	V.A.2.a
			NO_x	2 years	V.A.2.c
			CO	2 years	
			VOC	4 years	V.A.2.d
B	Blast Furnace Stoves	V.B.1.e	PM (several types)	2 years	V.B.2.a
			NO_x	2 years	
			CO	2 years	
			VOC	4 years	V.B.2.b
D	BOP Shop	V.D.1.l	NO_x	2 years	V.D.2.f
			CO	2 years	
			VOC	2 years	
	BOP Secondary Control	V.D.1.m	VOC	n/a	n/a
	BOP Desulfurization Process	V.D.1.p	VOC	5 years	V.D.2.c
F	Riley Boilers	V.H.1.g	PM (filterable)	2 years	V.H.2.a
			CO	4 years	V.H.2.d
			VOC	4 years	

The EPA recently addressed similar petition claims involving similar testing requirements in a title V permit also issued by ACHD to the U.S. Steel Clairton facility. *See U.S. Steel Clairton Order* at 7–24, 26–29. Notwithstanding some differences between the Edgar Thomson and Clairton Permits and permit records, much of the discussion from the *Clairton Order* is relevant here. In that order, the EPA explained:

[16] The EPA again observes that the Petitioners misquote ACHD's RTC, which does not contain any discussion about the County's inability to impose CEMS without an enforcement order. *See* RTC at 26 (response to comment #72).
[17] The Permit contains similar emission limits on other pollutants from these same emission units. The Petitioners do not challenge the monitoring associated with those other limits.

> As a general matter, EPA agrees with the Petitioners that the time period associated with monitoring or other compliance assurance provisions must bear a relationship to the limits with which the monitoring assures compliance. *See* 40 C.F.R. § 70.6(a)(3)(i)(B); *In the Matter of Georgia-Pacific Consumer Operations LLC, Crossett Paper Operations*, Order on Petition Nos. VI-2018-3 and VI-2019-12 at 18–19 (Feb. 22, 2023) (*Crossett Order*); *MCRRF Order* at 9. However, the determination of whether testing and monitoring is adequate in a particular circumstance is a case-by-case, context-specific determination, and EPA has not indicated that in all cases testing and monitoring must exactly mirror the averaging times of associated emission limits.

Id. at 9. To assist with these case-by-case determinations, the EPA has described five factors permitting authorities may consider as a starting point in determining appropriate monitoring for a particular facility:

> (1) the variability of emissions from the unit in question; (2) the likelihood of a violation of the requirements; (3) whether add-on controls are being used for the unit to meet the emission limit; (4) the type of monitoring, process, maintenance, or control equipment data already available for the emission unit; and (5) the type and frequency of the monitoring requirements for similar emission units at other facilities.

In the Matter of CITGO Refining and Chemicals Company, L.P., Order on Petition No. VI-2007-01 at 7–8 (May 28, 2009) (*CITGO Order*).

Here, ACHD addresses each of these factors for essentially all of the permit terms at issue in Claims A, B, D, and F. *See* TSD at 29–30, 66–71. However, the EPA agrees with the Petitioners that ACHD has not provided a sufficient rationale to justify why the Permit's testing, monitoring, and recordkeeping requirements are sufficient to assure compliance with the Permit's hourly and rolling 12-month emission limits. To the extent ACHD has provided such a rationale, its justification relies on the largely unexplained conclusions that the likelihood of violation of the emission limits is low, and that the other monitoring and recordkeeping provisions in the Permit provide continuous monitoring sufficient to assure compliance with the respective emission limits. These aspects of ACHD's justification are discussed in the following paragraphs.

Likelihood of Violation

The primary rationale advanced by ACHD is that the likelihood that the Edgar Thomson Plant will violate the limits at issue in Claims A, B, D, and F is "low," "very low," or "significantly low." TSD at 30, 66, 67, 68, 69, 71. For most of the limits at issue, ACHD provides two related reasons to support this conclusion: (i) the limits were established based on maximum potential emissions (plus a variability margin) and thus are unlikely to be violated, and (ii) the source's reported emission inventory over the past three years is significantly lower than the limits.

First, ACHD addresses the manner by which many of the emission limits at issue were established, explaining that "[t]he limits in this permit were based on testing done for the purpose of establishing emissions limits plus a factor for operational flexibility, so the likelihood of violation is low," and that "the emission limitations for these pollutants will be the maximum potential emissions under proper

operation of the emission units." TSD at 30, 17;[18] *see also* RTC at 2–3 (addressing comments from U.S. Steel regarding the authority for and origin of these limits). More specifically, ACHD indicates that the limits were generally "based on the highest of 2016-2018 Emission Factor Development Testing Result and 15% operational variability or compliance margin." TSD at 7 (discussing NO_x, CO, and VOC limits on the Blast Furnaces and Casthouses); *see id*. at 8, 10 (similar discussion for CO and VOC limits on the Blast Furnace Stoves and NO_x, CO, and VOC limits on the BOP Shop, but referencing 2018–2020 stack tests). ACHD further states: "This testing was conducted under normal operating conditions." RTC at 2.

ACHD also references this general explanation when justifying the testing and monitoring requirements associated with specific emission limits. *See, e.g.*, RTC at 23 (justifying monitoring for the Blast Furnaces and Casthouses in part because: "The potential emission in the draft permit is based on worst case scenario and the maximum capacity/throughput of the equipment."); TSD at 68 (justifying monitoring of CO and VOC from the Blast Furnace Stoves in part because: "The CO limit is based on stack testing done for the purpose of establishing emissions limits plus a factor for operational flexibility. Therefore, the likelihood of violating the limit is very low . . . .").

In the *U.S. Steel Clairton Order,* the EPA addressed a similar rationale from ACHD, which suggested that ACHD believed the source would not exceed its emission limits during normal operations. *U.S. Steel Clairton Order* at 16 n.14. The EPA went on to state:

> In this case, ACHD appears to indicate that the CO emission limits for these units were established such that the units' emissions cannot exceed their limits. If this is the case, and the units are unable to violate any of the emission limitations they are subject to, then infrequent testing and monitoring may be sufficient to assure compliance. However, more information is needed to understand how these limits were established and whether any additional measures are needed to ensure that compliance with each limit can be demonstrated. The Technical Review Memo associated with the Permit states that the emission limits in question were based on stack tests from 2012, 2014, and 2015. However, it contains no information to demonstrate that the stack tests are representative of the units' current and future performance, and it is unclear whether the units' emissions are variable in a way that may not be captured in a single stack test or if there are any operating parameters that may impact emissions between stack tests that should be monitored. Overall, the permit record does not contain enough quantitative technical details to support ACHD's statement that the emission limits were based on the units' "maximum potential emissions."

Id. at 16.

Similarly, here, ACHD has not provided enough information to establish that these emission limits reflect "worst case emissions" that cannot or are unlikely to be violated. Similar to the circumstances

[18] The full text of ACHD's second explanation is the following: "Section 2103.12.a.2.B of Article XXI requires that RACT be applied to pollutants regulated by Article XXI without established regulatory emission limitations. RACT for PM/PM_{10}, CO, SO_2, and VOC emissions from the facility emission units has been determined to be proper operation and maintenance of the equipment according to good engineering and air pollution control practices. Therefore, the emission limitations for these pollutants will be the maximum potential emissions under proper operation of the emission units as shown in the above emission summary." TSD at 17.

at issue in the *Clairton Order*, the record here "contains no information to demonstrate that the stack tests are representative of the units' current and future performance, and it is unclear whether the units' emissions are variable in a way that may not be captured in a single stack test." *U.S. Steel Clairton Order* at 16. ACHD repeatedly concludes—without explanation or record support—that "there is not much variability in process emissions" or "[t]here is no variability in the process emissions." TSD at 30, 66; *see id*. at 67–71. However, U.S. Steel's comments on the Draft Permit suggest that this is not the case for at least some units, asserting: "ACHD inappropriately and unjustly created a new emissions limit . . . without consideration of the other tests or operational variability." RTC at 10 (addressing emission limits on the Blast Furnace Stoves); *see id*. at 11 (same comment for emission limits on the BOP Shop), 13 (same comment for emission limits on the Riley Boilers).

Even if ACHD's position about these "worst case" limits was supported by more quantitative information, it is unclear whether ACHD's logic would apply equally to both the rolling 12-month and hourly limits at issue. For example, if (i) the limits were established based on testing conducted at each unit's maximum operating capacity (and, more importantly, based on stack testing representing maximum emission rates for each pollutant), and (ii) the source is unlikely to continuously operate these units at maximum capacity (with maximum emission rates) year-round, then ACHD's position may be reasonable with respect to the rolling 12-month limits. However, the hourly limits would require a different analysis. Presumably, the source is capable of running each individual unit at issue at near maximum capacity (with maximum emission rates) for short periods of time. Given that many of these limits were developed to include only a 15 percent compliance margin based on a single stack test, it is not clear from the permit record that the likelihood that Edgar Thomson will violate these hourly limits during any given hour is "very low." This may be true, but it would depend largely on whether the operating conditions during the stack test truly reflect "worst case" conditions that are unlikely or impossible to be achieved *on a short-term basis* during routine operations. ACHD does not identify any information in the permit record that indicates this is the case here.

The EPA observes that the foregoing discussion is only directly relevant to the limits that were established for the first time in this title V permit based on the results of stack testing at Edgar Thomson. Not all of the limits addressed in Claims A, B, D, and F were established this way. Instead, some of the limits at issue appear to have been previously established in other permitting actions or are based on different SIP authorities.[19] For the limits that were not established based on stack testing at Edgar Thomson, the permit record does not address whether or how the means by which these other limits were established results in a low likelihood of violation.

Second, ACHD justifies its conclusion that the likelihood of violating these limits is low with a universally applied statement that the facility's "emission inventory for the past three years is significantly lower than the limit." TSD at 66; *see id*. at 67, 68, 69, 71. With one exception, this

[19] The origin and legal authority underlying each of the emission limits is not entirely clear from the face of the Permit. Although the Permit does include citations to the legal authorities associated with the collective set of emission limits that apply to each emission unit, these citations are presented in bulk before a table containing multiple different limits for multiple different pollutants. It is not readily apparent from this table which limits are derived from which cited authorities. Nonetheless, the permit record provides more information about the origin of most of the specific emission limits at issue. *See* TSD at 7–12, 66–71. As relevant to the Petition claims, it appears that the following limits were not based on the results of stack testing: PM limits on the Blast Furnaces and Casthouses, PM and NO_x limits on the Blast Furnace Stoves, and PM limits on the Riley Boilers. *See id*.

conclusory assertion is not supported by any additional quantitative or qualitative information about the reported emission levels. *See, e.g.*, *U.S. Steel Clairton Order* at 12.

ACHD offers quantitative support for its position that the likelihood of violation is low in only one instance.[20] With respect to PM emissions from the Blast Furnaces and Casthouses, ACHD states: "The actual emission reported in 2021 for PM is significantly lower at 0.03 tons/yr." RTC at 23. By comparison, the limit on 12-month emissions of condensable PM (implicated by the Petition) from these units is 25.97 tons. Permit Conditions V.A.1.m, p. If the facility's annual emissions are expected to remain at this level in other years (*e.g.*, if this was not an anomaly due to unusually low production as the Petitioners suggest, *see* Petition at 14), then this could provide a reason to conclude that more frequent monitoring is not necessary. However, there is nothing in the permit record to support the conclusion that this reported emissions level is reflective of the units' current and future performance. *See, e.g.*, *U.S. Steel Clairton Order* at 16.

Even if ACHD's comparisons of reported emission inventory values and emission limits were supported by more quantitative information, it is unclear whether this would equally support the adequacy of the monitoring provisions associated with both the rolling 12-month and hourly limits at issue. Emissions inventory data is most likely to be relevant to the longer-term rolling 12-month emission limits. It is not clear how the facility's annual emission inventories would be relevant to establishing a low likelihood of violation of the hourly emission limits.

Overall, the EPA disagrees with the Petitioners' suggestion that previously low emissions are not relevant at all to determining the necessary frequency of monitoring. *See* Petition at 14, 20, 37; *U.S. Steel Clairton Order* at 9 ("The Petitioners argue that ACHD's reference to past stack tests is "irrelevant," but that is not the case. Past performance of units may be useful in the consideration of the likelihood of a violation of permit requirements, which is a factor that may be considered in determining appropriate monitoring for a particular facility."). Nonetheless, the EPA agrees with the Petitioners that any such conclusions about the likelihood of violation must be supported in the permit record, and ACHD has not adequately supported its conclusions on this point.

Monitoring and Recordkeeping of Fuel Use and Other Parameters

The requirements to conduct stack tests every 2, 4, or 5 years are not the only permit terms relevant to assuring compliance with the hourly and 12-month emission limits at issue in Claims A, B, D, and F. The Permit requires more frequent monitoring of various parameters associated with the performance of certain control devices. For example, as discussed in Claims A and D, the Permit includes requirements related to the performance of baghouses and venturi scrubbers that control filterable PM from the Blast Furnaces and Casthouses and the BOP Shop. However, the Petitioners do not challenge the sufficiency of the Permit's monitoring of filterable PM emissions from those units; they challenge monitoring associated with condensable PM, NO_x, CO, and VOC. As the Petitioners point out, because the facility's baghouses and venturi scrubbers do not directly control emissions of these pollutants, it is not clear how the parametric monitoring requirements associated with these control devices are

[20] ACHD also provides some discussion of numerical emission levels in one other instance, stating that "[t]he potential emissions limit for the CO and VOC are 4.76 tons and 1.85 tons respectively" for the Riley Boilers. RTC at 26. However, this is simply a recitation of the numerical values of the 12-month emission limits, and ACHD does not provide any comparison of reported actual emission values to those limits.

directly relevant to whether the Permit assures compliance with the specific emission limits at issue in Claims A, B, D, and F. Similar reasoning applies to the Permit's requirements to monitor visible emissions on a weekly basis; while a lack of visible emissions may be one indication that the units and control devices are functioning properly and in a manner that is consistent with the conditions observed during a stack test, it is not clear that such monitoring on its own bears a direct relationship to the quantity of emissions of condensable PM, NO_x, CO, and VOC at issue here.

The question, then, is whether the Permit requires sufficiently frequent monitoring of other parameters or variables that *do* impact emissions of the pollutants relevant to the claims in the Petition. ACHD offers a similar justification for nearly all of the limits at issue in Claims A, B, D, and F: "The content of criteria pollutants in the exhaust gas is consistent, so monitoring of fuel use can be used as parametric continuous monitoring of NO_x. The facility is required to record and report the amount of fuel combusted." TSD at 66; *see id*. at 30, 67, 68, 69, 70, 71.[21]

The Petitioners challenge this rationale, arguing that ACHD "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." Petition at 20. The EPA agrees with this assertion, as neither the Permit nor the permit record clearly explain the connection between fuel consumption and emissions. ACHD's intent may be for the Edgar Thomson Plant to calculate hourly and rolling 12-month emissions of the various pollutants at issue by multiplying hourly and rolling 12-month fuel usage by an emission factor derived from recent stack tests. If fuel consumption is the only relevant operational variable that could impact emissions at the facility (as ACHD suggests without further explanation or support), then this could be an acceptable means of assuring compliance with these emission limits. However, not only does the permit record not explain why this is the case, but the Permit itself does not specify this methodology for calculating emissions and ensuring compliance with the relevant limits. The Permit does include requirements to keep records of (and in some cases, to monitor) fuel consumption at all the emission units at issue, *see* Permit Conditions V.A.3.n, V.A.4.b (Blast Furnaces), V.B.4.a.1 (Blast Furnace Stoves), V.D.4.c.2 (BOP Shop), V.H.4.b.1 (Riley Boilers), yet it does not identify those conditions as the means by which the facility will demonstrate compliance with the limits. Instead, to the extent the Permit expressly identifies a means by which the facility will demonstrate compliance with the emission limits, it refers only to the stack testing requirements. *See* Permit Conditions V.A.2.a, c, d (Blast Furnaces), V.B.2.b (Blast Furnace Stoves), V.D.2.b, c, f (BOP Shop and related units), V.H.2.a, d (Riley Boilers).[22] As the EPA has previously explained, to the extent that specific permit terms (*e.g.*, monitoring or recordkeeping provisions) are relied upon to assure compliance with emission limits, the Permit should clearly state the connection between the compliance assurance provisions and the associated limits, and the permit record must explain how those requirements assure compliance with the relevant limits. *See, e.g.*, *In the Matter of Valero Refining-Texas, L.P., Valero Houston Refinery*, Order on Petition No. VI-2021-8 at

[21] The only emission limits implicated by Claims A, B, D, and F for which ACHD does *not* advance this rationale are the limits on condensable PM from the Blast Furnaces and Casthouses. It is not clear whether this distinction is meaningful or inadvertent.

[22] For the Blast Furnaces and Casthouses and the BOP Shop, the fuel consumption recordkeeping requirements are also framed generally as requirements to "demonstrate compliance with the requirements of this permit," but the Permit does not specifically connect these requirements to the emission limits at issue or explain the relationship between the two. *See* Permit Conditions V.A.4.b, V.D.4.c.

41 (June 30, 2022) (*Valero Houston Order*); *In the Matter of Owens-Brockway Glass Container Inc.*, Order on Petition No. X-2020-2 at 14–15 (May 10, 2021) (*Owens-Brockway Order*).

Overall, the Petitioners have demonstrated that the record is unclear as to whether the Permit's current testing, monitoring, and recordkeeping requirements are sufficient to assure compliance with the respective hourly and rolling 12-month emission limits on the Blast Furnaces and Casthouses, Blast Furnace Stoves, BOP Shop, and Riley Boilers. 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.6(c)(1), 70.8(c)(3)(ii). Thus, the EPA grants Claims A, B, D, and F.

Direction to ACHD: ACHD must ensure that the Permit contains sufficient testing, monitoring, and recordkeeping requirements to assure compliance with the hourly and 12-month emission limits at issue in Claims A, B, D, and F. ACHD may be able to achieve this by revising either the Permit or permit record, and the necessary approach may vary depending on the pollutant and emission units involved. The EPA encourages ACHD to consider the following:

If ACHD wishes to justify the sufficiency of the current permit requirements, ACHD should update the permit record to better support its conclusions. For example, if ACHD determines that no additional monitoring is required because it is impossible for the source to violate an emission limit, ACHD must explain the technical basis for this conclusion in accordance with the discussion included in the EPA's response. Or, if ACHD considers the current monitoring requirements sufficient due to a low likelihood of violation, ACHD should provide quantitative support for any such conclusions. For example, ACHD could provide numerical comparisons of prior stack test results and the emission limits, along with a discussion of why those stack test results are expected to be representative of current and future operating conditions. ACHD could also provide additional support for its position that variability is expected to be low by, for example, comparing emission levels between stack test runs or between separate stack tests, and/or by providing additional qualitative discussion about why operating conditions of the units are expected to generally mirror the conditions present during the stack tests. Any additional explanation on these topics should account for the relevant time periods associated with the limits at issue (*i.e.*, likelihood of violation and variability *on an hour-to-hour basis*), and should also account for any differences that may exist between different pollutants (*e.g.*, whether the operating conditions during any given stack test reflect maximum or representative emissions of all pollutants, or only certain pollutants).[23] ACHD should consider including any assumptions underlying its conclusions about likelihood of violation and variability—such as specific operating parameters relevant to past stack tests—as enforceable permit terms. Or, ACHD could consider requiring monitoring of those parameters (as discussed in the following paragraphs).

The EPA appreciates that the Permit requires monitoring and recordkeeping of certain information relevant to emissions on a more frequent basis than the Permit's stack testing requirements. Timely monitoring of relevant operating parameters could potentially provide an assurance of ongoing compliance with hourly and rolling 12-month emission limits. However, ACHD should revise the Permit to clearly state the connection between the relevant compliance assurance provisions and the

[23] Additionally, insofar as the stack test frequencies are concerned, ACHD should consider addressing why certain pollutants and certain emission units are subject to more frequent stack testing requirements (*e.g.*, every two years) while others are subject to less frequent requirements (*e.g.*, every 4 or 5 years). *See U.S. Steel Clairton Order* at 10. The current permit record includes essentially the same generic justification for all such permit terms and does not explain why the stack test frequencies differ.

associated limits, and must explain in the permit record how those requirements assure compliance with the relevant limits. *See, e.g.*, *Valero Houston Order* at 41; *Owens-Brockway Order* at 14–15. For example, the Permit could require the Edgar Thomson Plant to demonstrate compliance by calculating hourly and rolling 12-month emissions of the various pollutants at issue by multiplying hourly and rolling 12-month fuel usage by an emission factor derived from recent stack tests.

For most of the limits at issue, ACHD suggests that fuel usage is the only variable or operating parameter that influences emissions, such that emissions are expected to be constant per amount of fuel used. ACHD should consider whether other variables or operating conditions could cause emission rates to vary from those observed during stack tests, particularly on an hour-to-hour basis. Some other potentially relevant operating conditions or variables may have been maintained or monitored during prior stack tests. ACHD could consider whether such variables should be monitored on an ongoing basis. This is more likely to be important for the hourly limits, given the relatively low compliance margins (15 percent) associated with the limits that were derived from recent stack test results.

To the extent that ACHD concludes that other operating variables may impact compliance with the emission limits, ACHD should ensure that the Permit clearly identifies what those variables are, and how the relevant variables interact, for purposes of calculating emissions and demonstrating compliance with the emission limits. For example, with respect to the BOP Shop, ACHD states that monitoring of production serves as a form of parametric monitoring of NO_x, CO, and VOC emissions. *See* TSD at 30, 70; Permit Condition V.D.4.c.1.[24] It is unclear whether and how monitoring production interacts with recordkeeping of fuel usage to demonstrate compliance with the emission limits (*i.e.*, are emissions calculated exclusively based on production or fuel usage, or are they calculated based on a combination of both?). Again, although monitoring production may be useful for calculating rolling 12-month emissions, it is unclear whether or how this information would demonstrate compliance with hourly emission limits.

Additionally, ACHD should ensure that the time period of the Permit's monitoring and recordkeeping requirements bears a rational relationship to the limits at issue. For example, to the extent any permit terms do not currently require hourly monitoring of fuel usage,[25] ACHD should clearly demonstrate in the permit record how such less frequent monitoring adequately assures compliance with the relevant limit(s). In the event ACHD cannot clearly demonstrate how such monitoring assures compliance, it should consider revising those permit terms. Again, this is primarily relevant to assuring compliance with the hourly emission limits.

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

[24] Of the emission units relevant to Claims A, B, D, and F, the BOP Shop is the only emission unit for which ACHD identifies monitoring of production as a potential compliance assurance mechanism. *See* TSD at 71. However, the EPA observes that other units have similar recordkeeping requirements related to production. *See, e.g.*, Permit Condition V.A.4.b.1 (Blast Furnaces and Casthouses).

[25] For example, the fuel use recordkeeping conditions associated with the Blast Furnaces and Casthouses include daily, monthly, and annual obligations, but not hourly obligations. *See* Permit Condition V.A.4.b.

Petition Claim: The Petitioners claim that the Permit lacks sufficient monitoring to assure compliance with limits on sulfur concentration in the effluent gas from the Vacuum Degasser (for reasons different from those addressed in Claims A, B, D, and F). *See* Petition at 21–25.

The Petitioners observe that the Permit limits the concentration of SO_2 "in the effluent gas from the Vacuum Degasser from exceeding the lesser of the facility's potential to emit or 500 ppm (dry volumetric basis) at any time." *Id*. at 21 (citing Permit Condition V.G.1.c). The Petitioners further observe that the Permit requires monitoring of the sulfur concentration of coke oven gas at least once every 24 hours in order to assure compliance with this limit. *Id*. at 22 (citing Permit Condition V.G.3.b). The Petitioners note that the Permit also states that measurements taken at the U.S. Steel Clairton facility may satisfy this requirement. *Id*. (citing Permit Condition V.G.3.b).

The Petitioners take issue with this last requirement because the Permit does not explain why measurements of sulfur concentration taken at the U.S. Steel Clairton facility "are sufficient to assure compliance with the Edgar Thomson Plant emission limit." *Id*. The Petitioners also repeatedly contend that ACHD did not provide a rationale to explain why measurements taken at Clairton are sufficient to assure compliance with the sulfur concentration limits at Edgar Thomson, and that the County did not address public comments on this issue. *Id*. at 22, 23, 24.

Additionally, the Petitioners argue that monitoring requirements must be included in the title V permit itself. *Id*. at 25 (citing *Valero Houston Order* at 23). The Petitioners argue that the monitoring requirements in the Permit are insufficient because the specific requirements of the monitoring at Clairton are not included or expressly incorporated into the Permit for Edgar Thomson. *Id*. For example, the Petitioners repeatedly claim that the Permit does not specify how frequently such measurements must be taken at the Clairton facility. *Id*. at 22, 23, 24, 25.[26] The Petitioners also assert that the Permit does not define the "current operating scenario" under which measurements would be taken at Clairton. *Id*. at 22.

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

The Petitioners have demonstrated that the Permit does not impose sufficient requirements to ensure that measurements taken at U.S. Steel's Clairton facility will assure compliance with the sulfur concentration limit applicable to the Vacuum Degasser at U.S. Steel's Edgar Thomson Plant.

The Permit imposes the following limit: "The concentration of sulfur oxides expressed as sulfur dioxide, in the effluent gas from the Vacuum Degasser shall not exceed the lesser of the potential to emit or 500 ppm (dry volumetric basis) at any time . . . ." Permit Condition V.G.1.c. To demonstrate compliance with this limit, the Permit further states:

> The permittee shall measure the sulfur concentration of all coke oven gas used for combustion or flaring at the facility, a minimum of once per each successive twenty-four-hour time period. The sulfur concentration shall be expressed and recorded as hydrogen sulfide. Measurements of hydrogen sulfide concentrations in coke oven gas shall be

[26] The Petitioners also repeatedly suggest that this monitoring scheme is insufficient because the limit at Edgar Thomson applies "at any time" or "at all times." *Id*. at 22, 23, 24.

> conducted according to Section 2107.08 of Article XXI. Under the current operating scenario coke oven gas measurements are taken at the Clairton Plant, and these measurements will satisfy this condition (V.G.3.b). If there is a change to the current operating scenario, the sulfur concentration measurements required by this condition (V.G.3.b) will be taken at the Edgar Thomson Plant.

Permit Condition V.G.3.b.

As an initial matter, there is nothing inherently problematic with the Permit's allowance that measurements of sulfur compounds in coke oven gas may take place at U.S. Steel's nearby Clairton facility. It is not uncommon for the characteristics of certain fuels to be measured at a representative off-site location, or at some other representative point upstream of the specific emission unit that ultimately combusts the fuel. As with other compliance assurance questions, determining whether such an arrangement is appropriate—and whether this arrangement is sufficiently embodied in enforceable permit terms—requires a case-by-case evaluation. Here, contrary to the Petitioners' allegation, ACHD offers a rational explanation for this arrangement in its RTC: "The Vacuum Degasser uses desulfurized COG fuel, which is produced in Clairton and [ACHD] believes that it is appropriate to have the concentration of the coke oven gas measured at Clairton." RTC at 26. The Petitioners do not offer any substantive rebuttal to this explanation or advance any arguments as to why this arrangement would be inappropriate here or insufficient to assure compliance with the limits at the Edgar Thomson Plant.

Nonetheless, the Petitioners are correct to question the lack of clarity in the permit terms embodying this arrangement between U.S. Steel's Clairton and Edgar Thomson Plants. As written, the Permit's statements that "[t]he permittee shall measure the sulfur concentration of all coke oven gas used for combustion or flaring at the facility" and "coke oven gas measurements are taken at the Clairton Plant" appear to be in conflict. Although the Clairton and Edgar Thomson Plants are both currently owned by U.S. Steel, the *permittee* here is the Edgar Thomson Plant. It is not clear that the permittee can itself satisfy this condition as written, as nothing in the Permit or permit record indicate that the Edgar Thomson Plant (or representatives of this facility) have the authority or ability to directly measure sulfur concentrations in the coke oven gas produced at the Clairton Plant. Overall, the permit term, as written, does not clearly impose obligations that the permittee itself can fulfill, and thus appears to be potentially unenforceable against the permittee.

Additionally, as the Petitioners point out, the Permit does not identify the "current operating scenario" under which sulfur concentration measurements are taken at Clairton. Although the RTC explains some aspects of the current operating scenario (*e.g.*, Edgar Thomson uses desulfurized coke oven gas produced at Clairton), this is not reflected in enforceable permit terms. Additionally, neither the Permit nor the permit record address or adequately explain whether there are other potentially relevant aspects of the current operating scenario that could affect whether the sulfur content of coke oven gas measured at Clairton remains representative of the gas eventually combusted in Edgar Thomson's Vacuum Degasser.

Overall, because this permit term is not written in a manner that is readily enforceable against the Edgar Thomson Plant, it is insufficient to assure compliance with the sulfur concentration limit that

applies to the Vacuum Degasser at the Edgar Thomson Plant. 42 U.S.C. § 7661c(a), (c). Thus, the EPA grants Claim C.

Direction to ACHD: ACHD must revise the Permit to ensure that any permit terms necessary to assure compliance with permit limits on sulfur content are enforceable against the permittee: U.S. Steel's Edgar Thomson Plant. ACHD could resolve this objection while still allowing measurements to be taken off-site by adjusting the language in the permit term to focus on the Edgar Thomson Plant's responsibilities.

ACHD should also ensure that the Permit defines the current operating scenario under which measurements taken at Clairton will be sufficient to assure compliance with the requirements at Edgar Thomson. The Permit's description of the operating scenario should account for any relevant variables that might affect whether the sulfur content of coke oven gas measured at Clairton remains representative of the gas eventually combusted in Edgar Thomson's Vacuum Degasser.

The EPA appreciates that the current permit term identifies a minimum time period and method by which such sulfur measurements must be taken. When ACHD redrafts this permit term, it must ensure that such details are accurately reflected in the Permit. The EPA understands that as a matter of practice (and as required by other permit terms), measurements of the sulfur content of coke oven gas are taken continuously at Clairton. *See, e.g.*, Permit Condition IV.31.c. ACHD may also want to consider updating the Permit to reflect this already implemented monitoring requirement.

Although Claim C only addresses one permit term associated with the Vacuum Degasser, the EPA observes that other permit terms include nearly identical language allowing coke oven gas sulfur content to be measured at Clairton. ACHD should consider similar updates to these permit terms when it revises the Permit to respond to the EPA's objection.

Claim E: The Petitioners Claim That "The Renewal Permit Does Not Provide Sufficient Monitoring and Testing Requirements to Assure Compliance with the NO_x, CO, and VOC Emissions Limits for the Caster Tundish Preheaters."

Petition Claim: The Petitioners claim that the Permit does not include any testing to assure compliance with NO_x, CO, and VOC emission limits on the Caster Tundish Preheaters. *See* Petition at 31–34.

The Petitioners observe that the Permit imposes rolling 12-month limits on NO_x, CO, and VOC from the Caster Tundish Preheaters. *Id*. at 31 (citing Permit Condition V.F.1.c).

The Petitioners state that the Permit does not impose any testing requirements on these units, but instead requires U.S. Steel to measure the monthly quantity of natural gas and coke oven gas combusted in these units. *Id*. (citing Permit Condition V.F.3.a).

The Petitioners assert that "neither the Renewal Permit, the [RTC], nor the [TSD] describe or explain how the monthly measurement of the quantity of natural gas and coke oven gas combusted will adequately measure NO_x, 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." *Id*. at 31; *see id*. at 31–32, 32–33.

The Petitioners challenge ACHD's RTC on this issue, which states:

> 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.

Id. at 33 (quoting RTC at 26).[27] The Petitioners contest the relevance of these points, arguing: "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." *Id*.

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

Permit Condition V.F.1.c. provides: "Emissions from the Caster Tundish Preheaters shall not exceed" 12.0 tons of NO_x, 3.0 tons of CO, and 1.0 ton of VOC per consecutive 12-month period. As relevant here, the only applicable testing, monitoring, or recordkeeping provisions associated with this requirement provide:

> The permittee shall measure the monthly quantity of natural gas and coke oven gas combusted by the Caster Tundish Preheaters.
> ***
> The permittee shall keep and maintain records to demonstrate compliance with the requirements of this permit[.] Data and information required to determine compliance shall be recorded and maintained by the permittee and shall include the following: . . . 1) The total amount and type of fuel used at the Caster Tundish Preheaters (monthly, 12-month); . . . .

Permit Conditions V.F.3.a, V.F.4.b.

As the Petitioners correctly point out, ACHD's justification for these conditions provides little insight into why no testing is required or how the facility will demonstrate compliance with these rolling 12-month limits. *See* RTC at 26. ACHD indicates that "potential emissions from the Dual Strand Continuous Caster" (which includes the Caster Tundish Preheaters) "are significantly lower than the major threshold emissions limit." *Id*. It is not clear what ACHD's reference to "the major threshold emissions limit" means, but this comparison does not appear directly relevant to the emission limits at issue here, which are set at 12.0 tons NO_x, 3.0 tons CO, and 1.0 ton VOC per consecutive 12-month period (values lower than any relevant individual major source or major modification emissions thresholds under most CAA programs).

[27] The quote supplied by the Petitioners does not precisely align with the text of ACHD's actual RTC, although the differences are not substantive. *See* RTC at 26.

ACHD also indicates that "the actual reported emissions inventory within the last five (5) years for any of the criteria pollutant is below 5 tons." *Id*. Again, it is not clear how this comparison is relevant to the emission limits at issue. Notably, two of the limits are lower than the 5-ton threshold ACHD references (3.0 tons CO; 1.0 ton VOC). So, even if annual (12-month) emissions of CO or VOC were lower than 5 tons, this does not mean the source complied (or will comply) with those two limits.

Even assuming that ACHD's justification for not requiring emissions testing was based on a comparison of potential or actual emissions to the three emission limits at issue here, nothing in the permit record identifies what those potential or actual emission levels are or how they were obtained.[28] Overall, nothing in the Permit or permit record provides any quantitative support for ACHD's assertion that emissions from these units are so low that testing is not necessary.

Additionally, as the Petitioners state, nothing in the Permit or permit record explains how the monthly measurement of the quantity of natural gas and coke oven gas combusted will adequately measure NO_x, CO, and VOC emissions for purposes of demonstrating or assuring compliance with the rolling 12-month emission limits. Petition at 31. In other words, similar to the permit provisions discussed previously with respect to Claims A, B, D, and F, the Permit does not explain how the source will calculate emissions based on monthly monitoring and recordkeeping of fuel usage. Presumably, the facility will multiply this monthly fuel consumption data by emission factors (which may vary depending on the fuel used) in order to calculate emissions. But the Permit does not identify any such methodology or specify the emission factors used, and the permit record contains no justification for why such a methodology (and the specific emision factors used) would be sufficient or why other mechanisms (*e.g.*, source-specific stack tests) are unnecessary or infeasible.

Overall, the permit record is insufficient to determine whether the Permit contains sufficient monitoring to assure compliance with the rolling 12-month emission limits on NO_x, CO, and VOC from the Caster Tundish Preheaters. 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.6(c)(1), 70.8(c)(3)(ii). Thus, the EPA grants Claim E.

Direction to ACHD: ACHD must revise the permit record or Permit to ensure that the Permit contains sufficient monitoring to assure compliance with the rolling 12-month emission limits on NO_x, CO, and VOC from the Caster Tundish Preheaters.

At minimum, if ACHD determines that no additional monitoring is necessary, it must revise the permit record to justify why this is so. Such a justification could be based on a conclusion that the Edgar Thomson Plant cannot possibly violate these emission limits at issue given its physical and operational design. Any such conclusion would need to be accompanied by quantitative support. Or, such a justification could also be based on a demonstration that there is a low likelihood that the facility will violate these limits (among other factors). Any such justification should include a clear comparison between the facility's potential or past emissions and the emission limits at issue (as opposed to other values like major source thresholds, major modification thresholds, or the 5-ton threshold previously referenced). See the EPA's response to Claims A, B, D, and F. In justifying a decision to not impose stack testing on these units, ACHD may also consider other factors, such as the feasibility of testing.

[28] For example, the emissions calculation spreadsheet included as Appendix B to the TSD does not provide any emission calculations for the three pollutants at issue, but instead simply restates the three permit limits. *See* TSD at 54.

If the facility's compliance with these limits depends on the amount (and type) of fuel consumed—as the current monitoring and recordkeeping requirements suggest—ACHD should revise the Permit to more clearly identify how fuel use-information will be used to demonstrate compliance with these emission limits, including any emission factors or other variables that correlate fuel usage to emissions values. *See, e.g.*, *Valero Houston Order* at 41; *Owens-Brockway Order* at 14–15. In this case, ACHD should also revise the permit record to justify why such emission factors or other variables are sufficient to assure compliance in lieu of testing.

Claim G: The Petitioners Claim That "The Renewal Permit Does Not Establish Sufficient Monitoring and Testing Requirements to Assure Compliance with the PM Emission Limits for the Circulating Water Cool[ing] Towers."

Petition Claim: The Petitioners claim that the Permit contains insufficient monitoring to assure compliance with hourly and rolling 12-month PM emission limits on the Circulating Water Cooling Towers because it does not specify any sampling time frame or frequency. *See* Petition at 38–42.

The Petitioners observe that the Permit imposes hourly and 12-month emission limits on filterable total PM, PM_{10}, and $PM_{2.5}$ from the Circulating Water Cooling Towers. *Id*. at 38 (citing Permit Condition V.K.1.b). The Petitioners further observe that the Permit requires U.S. Steel to monitor for total dissolved solids (TDS) in the recirculating water. *Id*. (citing Permit Condition V.K.3).

The Petitioners state that although the Draft Permit included a requirement for monthly monitoring of TDS, this monthly frequency was removed from the Final Permit. *Id*. at 39. The Petitioners contend that "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." *Id*. (citing 40 C.F.R. § 70.6(a)(3)(i)(B); *Sierra Club*, 536 F.3d at 676–77; *MCRRF Order* at 9).[29]

The Petitioners assert that ACHD failed to provide a reasoned explanation of these permit terms. *Id*. at 39–40, 41–42. First, the Petitioners claim that ACHD's statement that the likelihood of violating the limit is low and the last three years' emissions inventory has been significantly lower than the limit fails "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." *Id*. at 39 (citing TSD at 72). Second, the Petitioners question the responsiveness of ACHD's RTC, which 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 41 (quoting RTC at 19).

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

The Permit imposes hourly and consecutive 12-month emission limits on PM (filterable), PM_{10} (filterable), and $PM_{2.5}$ (filterable) from the Circulating Water Cooling Towers. Permit Condition V.K.1.b. The Draft Permit released for public comment included the following requirement: "The permittee

[29] The Petitioners also allege that the 30-day monitoring in the Draft Permit was not frequent enough to assure compliance with the hourly and rolling 12-month emission limits. Petition at 39.

shall monitor the total dissolved solids (TDS) of the recirculating water (Conductivity may be used to estimate TDS) *at least once per month for the purpose of emission inventory*." Draft Permit Condition V.K.3 (emphasis added). After the public comment period, ACHD revised this condition in the Proposed and Final Permits, which state the following: "The permittee shall monitor the total dissolved solids (TDS) of the recirculating water (Conductivity may be used to estimate TDS)." Final Permit Condition V.K.3; *see also* Final Permit Condition V.K.4.a (recordkeeping provision cross-referencing this monitoring requirement).

Nothing in the permit record explains why ACHD removed the timing provision from this monitoring requirement. *See* RTC at 17, 26; TSD at 13, 30, 72. To the contrary, the permit record suggests that ACHD considers monitoring of TDS an important component of the source's calculation of PM emissions from the cooling tower. *See* TSD at 13 ("Emissions from the cooling towers are PM and are estimated using the Reisman and Frisbie method based on cooling tower drift rates and [TDS] concentration limits."[30]); *id*. at 72 ("The PM emissions [are] based on the [TDS] and the drift rate.").

Because the Permit no longer identifies the frequency with which the Edgar Thomson Plant must monitor TDS, the requirement to monitor TDS is effectively meaningless and unenforceable. Accordingly, because the Permit no longer includes an enforceable requirement to measure TDS with any stated frequency, and because the Permit does not specify any other means by which the source will demonstrate compliance with the hourly and 12-month PM emission limits,[31] the Permit does not assure compliance with those limits. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1). Thus, the EPA grants Claim G.

Direction to ACHD: ACHD must revise the Permit to include monitoring sufficient to assure compliance with the hourly and 12-month PM emission limits on the cooling towers. To the extent that monitoring of TDS will be the primary means by which Edgar Thomson will demonstrate compliance with these limits,[32] the Permit must include a frequency for TDS measurements. ACHD must explain the basis for the chosen frequency and should also address the public comments that challenged the sufficiency of the monthly sampling frequency in the Draft Permit. Any such frequency should account for other

[30] ACHD's reference to TDS concentration "limits" appears to be in error, as the Permit contains no such limits and ACHD elsewhere takes the position that setting independently enforceable limits on TDS would be impractical given the variability of TDS in the incoming water source. *See* RTC at 17. Note that this discussion in ACHD's RTC was presented in response to public comments requesting that ACHD establish binding limits on TDS in the cooling tower water; this issue is not raised in the Petition. However, to the extent ACHD's RTC on this issue could be relevant not only to setting TDS limits, but also to TDS monitoring, it actually undermines ACHD's position. The fact that the water used in the cooling towers has variable TDS levels provides a greater reason to sample TDS, and to do so with an appropriate frequency. *See, e.g.*, *CITGO Order* at 7 (identifying variability as a key consideration in determining the monitoring necessary to assure compliance).

[31] The Permit also contains various work practice and inspection and maintenance requirements for the cooling towers. *See* Permit Conditions V.K.4.b, V.K.6; *see also* TSD at 30, 72. Although these conditions may help ensure that the cooling towers properly function (and control emissions), there does not appear to be a direct correlation between these activities and emission rates. Thus, these permit terms appear less relevant than TDS monitoring for purposes of calculating emissions to demonstrate compliance with the hourly and 12-month PM emission limits.

[32] Although the permit record does not suggest that this is the case, if the facility's compliance with the PM limits does *not* depend on TDS concentrations (or other variables)—in other words, if it is impossible for the facility to violate these limits regardless of TDS concentrations (or other variables)—then it may not be necessary to make any changes to the Permit. However, in that case, ACHD would need to revise the permit record to explain the technical basis for this conclusion, and ACHD should consider whether it is necessary to include any assumptions underlying this conclusion as enforceable permit terms.

relevant factors including the acknowledged variability of TDS in the incoming water from the Monongahela River. *See* RTC at 17.

ACHD should also consider revising the Permit to clearly establish the connection between monitoring of TDS and PM emissions. The permit record currently suggests that emission calculations are based on "the Reisman and Frisbie method based on cooling tower drift rates and [TDS]." TSD at 13. To the extent that ACHD considers this calculation methodology necessary for purposes of demonstrating compliance with the Permit's emission limits, the methodology should be included as an enforceable condition of the Permit. *See, e.g.*, *Valero Houston Order* at 41; *Owens-Brockway Order* at 14–15.

Claim H: The Petitioners Claim That "The Renewal Permit's Testing and Monitoring Requirements of SO_2 from Various Sources and the Facility as a Whole Do Not Assure Compliance with Its Hourly and Annual SO_2 Emission Limitations."

Petition Claim: The Petitioners claim that stack testing every two years and measuring the hydrogen sulfide (H_2S) content of the blast furnace gas quarterly are insufficient to assure compliance with hourly and rolling 12-month SO_2 emission limits on multiple emission units. *See* Petition at 43–47.

The Petitioners observe that the Permit imposes hourly and rolling 12-month emission limits on SO_2 from the Blast Furnaces, Blast Furnace Stoves, BOP Shop, BOP Process (roof), and Caster Tundish Preheaters. *Id*. at 42 (citing Permit Conditions V.A.1.m, p, and r.; V.B.1.f; V.D.1.l and n; and V.F.1.c).[33] The Petitioners indicate that some of these units (Blast Furnace Casthouse baghouses, Blast Furnace Stoves, and the BOP Shop venturi scrubber) are subject to a requirement to stack test every two years. *Id*. at 42–43 (citing Permit Conditions V.A.2.b, V.B.2.a, V.D.2.f). The Petitioners also acknowledge a site-wide condition requiring U.S. Steel to measure the H_2S content of blast furnace gas combusted by the facility at least once every calendar quarter. *Id*. at 42 (citing Permit Condition IV.31.b). The Petitioners assert that the "Permit does not identify any other testing or monitoring requirements for these requirements." *Id*. at 44.

The Petitioners contend that "[t]he frequencies of these requirements are not reasonably related to the hourly or 12-month rolling emission limits in the Draft Permit" and are too infrequent to assure compliance with those limits (for reasons similar to those discussed with respect to Claims A, B, D, and F). *Id*. at 43.; *see id*. at 44, 45. More specifically, the Petitioners assert that "[t]his quarterly requirement [to monitor the H_2S content of blast furnace gas] has no reasonable relationship with the hourly or 12-month rolling emission limits for SO_2 from any of the above-referenced sources and therefore does not assure compliance with those limits." *Id*. at 42.

The Petitioners further assert that ACHD has not provided a clear rationale for these conditions, especially given its decision to impose more frequent monitoring requirements (SO_2 CEMS) for other units at the facility (the Riley Boilers). *Id*. at 44, 45–46. The Petitioners specifically challenge ACHD's RTC, which the Petitioners claim contains no explanation of how the existing requirements will assure compliance with the hourly and 12-month SO_2 limits. *Id*. at 46 (citing RTC at 29).

[33] The Petitioners also mention the Blast Furnace Gas Flare at the beginning of this claim, but later acknowledge that this unit is no longer subject to SO_2 emission limits. *See* Petition at 42, 42 n.7; s*ee also* the discussion of Petition Claim J in this Order.

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

As relevant to this claim, the Permit includes hourly and rolling 12-month emission limits on SO_2 from the Blast Furnaces (Permit Condition V.A.1.r), the Blast Furnace Stoves (V.B.1.f), the BOP Shop (V.D.1.l), the BOP Process roof (V.D.1.n), and the Caster Tundish Preheaters (V.F.1.c).

This claim is similar to the four claims addressed together at the beginning of the EPA's response (Claims A, B, D, and F), but with one notable distinction that is based on the pollutant at issue in Claim H: SO_2. Because emissions of SO_2 depend on the quantity of sulfur in the fuels combusted, monitoring of sulfur content in fuel (by measuring H_2S) can be an important compliance assurance tool. Thus, here, the Petitioners challenge not only the frequency of stack testing that applies to some of these units (the Blast Furnaces and Casthouses, Blast Furnace Stoves, and BOP Shop),[34] but also the site-wide requirement to measure H_2S in the blast furnace gas on a quarterly basis. Again, the core Petition argument is that the frequency of such monitoring does not align with the time frame of the associated limits.

As an initial matter, it is not entirely clear whether the Edgar Thomson Plant relies on the quarterly blast furnace gas monitoring to assure compliance with the SO_2 limits on all of emission units identified by the Petitioners. Similar to the lack of connection between fuel monitoring provisions and compliance with emission limits discussed elsewhere in this Order, the Permit does not expressly identify H_2S monitoring as a means of demonstrating compliance with the SO_2 limits at issue here. Instead, the requirement to monitor H_2S concentration in blast furnace gas is contained within a site-wide condition (Permit Condition IV.31.b) and is only occasionally referenced by other permit terms, including one permit term specific to the Blast Furnaces. *See* Permit Conditions IV.31.b, V.A.3.c. ADHC's permit record provides some additional insight into the types of fuels combusted by different units. For example, it is clear that both the Blast Furnaces and Blast Furnace Stoves combust blast furnace gas (along with coke oven gas and natural gas). *See* Permit Table II-1; Permit Conditions V.A.3.c, V.B.1.b; TSD at 3, 5, 37, 43, 66, 68. However, it is unclear whether the other units implicated by this claim (BOP Shop, BOP Process roof, or Caster Tundish Preheaters) have any emissions from the combustion of blast furnace gas, and the Permit and permit record seem to suggest that they may only have emissions from the combustion of coke oven gas or natural gas.[35] Because it is not clear from the permit record that this is the case, the EPA cannot determine whether the issues identified in the following paragraphs apply to all of the units identified by the Petitioners.

For the units that do rely on quarterly measurements of H_2S in blast furnace gas, the Petitioners have demonstrated that the record is inadequate to determine whether this frequency is sufficient to assure compliance with the hourly and rolling 12-month SO_2 emission limits on these units. ACHD's response to public comments questioning the sufficiency of quarterly H_2S measurements does not address the relationship between the time frames of this monitoring and the associated emission limits. *See* RTC at

[34] The Petitioners do not mention testing for other units (BOP Process roof and Caster Tundish Preheaters), nor do they allege that the lack of SO2 testing for those units presents a basis for the EPA to object to the Permit. The Petitioners do challenge the lack of testing at the Caster Tundish Preheaters in Claim E, but that claim only relates to NO_x, CO, and VOC.
[35] No portion of the Permit or permit record associated with these units specifically references blast furnace gas, but certain parts of the Permit and permit record reference coke oven gas or natural gas. *See, e.g.*, Permit Conditions V.D.3.a, V.F.3.a, V.F.3.b, V.F.4.b; TSD at 52, 70.

27. Further, the EPA observes that this quarterly monitoring stands in stark contrast to other permit terms, which require either continuous or hourly monitoring of the sulfur content of coke oven gas and mixed gas, respectively. *See, e.g.*, Permit Conditions IV.31.a. and c. Additionally, the permit record does not explain why the units at issue here are treated differently from other units that are required to monitor SO_2 using a CEMS pursuant to a consent decree (the Riley Boilers). Overall, nothing in the permit record explains how the Permit's stack test requirements, combined with quarterly monitoring of H_2S in blast furnace gas, are sufficient to assure compliance with the Permit's hourly and rolling 12-month SO_2 limits. 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.6(c)(1), 70.8(c)(3)(ii). Thus, The EPA grants Claim H.

Direction to ACHD: ACHD must revise the permit record or Permit as necessary to ensure that the Permit assures compliance with the hourly and rolling 12-month SO_2 limits on the Blast Furnaces, the Blast Furnace Stoves, the BOP Shop, the BOP Process roof, and the Caster Tundish Preheaters. First, ACHD must clarify which emissions units combust blast furnace gas and whether they rely on the quarterly monitoring of blast furnace gas H_2S content as a means of assuring compliance with these emission limits. To the extent that certain units rely on this monitoring as a means of demonstrating compliance with these emission limits, the Permit should expressly state this connection and the permit record should explain the relationship between these variables. *See, e.g.*, *Valero Houston Order* at 41; *Owens-Brockway Order* at 14–15.

For those units that rely on monitoring of H_2S in blast furnace gas, ACHD must, at minimum, revise the permit record to explain why quarterly measurements from this fuel source (combined with any relevant stack testing)[36] are sufficient to assure compliance with these limits on an hourly and rolling 12-month basis. For example, ACHD could evaluate recent quarterly monitoring data to evaluate the variability of H_2S in blast furnace gas.

As discussed with respect to Claims A, B, D, and F, ACHD should also consider whether the monitoring of other variables is necessary to assure compliance with these limits. It appears that many of the units at issue are also subject to requirements to monitor or keep records of fuel consumption. Presumably, understanding the type and quantity of fuel burned (in addition to the sulfur content of this fuel and the results of stack tests) is necessary to ensure that the facility's SO_2 emissions remain below the limits at issue. If this is the case, the EPA encourages ACHD to revise the Permit to explicitly state this connection and to update the permit record to explain this connection. *See, e.g.*, *Valero Houston Order* at 41; *Owens-Brockway Order* at 14–15. ACHD should also ensure that the time frames associated with any such monitoring requirements are rationally related to the associated limits.[37]

Claim I: The Petitioners Claim That "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."

[36] Although the Petitioners do not challenge the lack of stack testing for SO_2 from the BOP Process roof or Caster Tundish Preheaters, ACHD may want to consider the relevant points raised in EPA's response to Claim E when responding to this Order.

[37] As previously indicated, the fuel recordkeeping provision associated with the Blast Furnaces applies on a daily (not hourly) basis. *See* Permit Condition V.A.4.b. For the Caster Tundish Preheaters, the fuel recordkeeping frequency is monthly. *See* Permit Condition V.F.3.a, V.F.4.b.

Petition Claim: The Petitioners recount that the Draft Permit included limits on HCl and total HAP emissions from Blast Furnace No. 1 and No. 3 and the associated Casthouses. Petition at 47 (citing Draft Permit Conditions V.A.1.m and p). The Petitioners claim that limits on HCl and total HAP emissions from the Blast Furnaces and Casthouses were removed from the Permit without explanation. *Id.*

The Petitioners observe that the Draft Permit stated that these limits were derived from ACHD Article XXI §§ 2103.12.a.2.B and 2104.02.c.9.A, which are part of the EPA-approved SIP. *Id*. (citing Draft Permit Conditions V.a.1.m and p). The Petitioners state that requirements of a federally enforceable SIP are "applicable requirements" for title V. *Id*. at 48 (citing 40 C.F.R. § 70.2). The Petitioners thus claim that these HCl and total HAP emission limits were applicable requirements, and that ACHD provided no rationale or evidence to the contrary. *Id*. at 47. The Petitioners contend that as applicable requirements, these limits must be included in the Permit and supported by sufficient monitoring and testing requirements. *Id*. at 47–48 (citing C.F.R. § 70.6(a)(1)).

The Petitioners assert that ACHD failed to provide a clear rationale for removing these limits from the Permit. *Id*. at 48–49. In fact, the Petitioners observe that ACHD's response to a comment from U.S. Steel expressly rejected the permittee's request to remove the limits from the Permit. *Id*. at 49 (citing RTC at 8).

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

Title V permits must include and assure compliance with all applicable requirements of the CAA. 42 U.S.C. § 7661c(a), (c); 40 C.F.R. § 70.6(a)(1), (c)(1). The term "applicable requirement" includes "any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act," to the extent those requirements "apply to emissions units in a part 70 source." 40 C.F.R. § 70.2.

Here, the EPA-approved Pennsylvania SIP includes Art. XXI § 2103.12.a.2.B of ACHD's Rules and Regulations. 40 C.F.R. § 52.2020(c); 69 Fed. Reg. 52831 (Aug. 30, 2004).[38] This regulation states, in relevant part:

> The Department shall not issue or reissue any Operating Permit, or any amended, revised, or modified Operating Permit, under this Subpart, unless it has: . . . 2. Received a complete application, including all applicable fees, meeting all applicable requirements of this Article, and which demonstrates that: . . . B. The source complies with all applicable emission limitations established by this Article, or where no such limitations have been established by this Article, [Reasonably Available Control Technology, or RACT] has been applied to existing sources with respect to those pollutants regulated by this Article; . . . .

[38] This regulation is also part of ACHD's EPA-approved title V operating permit program.

ACHD Rules and Regulations Art. XXI § 2103.12.a.[39]

ACHD discusses its interpretation of this regulation in the RTC, stating:

> For limits not from an Installation Permit, Article XXI requires all sources to meet Reasonably Achievable Control Technology (as defined in Article XXI, §2101.20) under §2103.12.a.2.B. Section 2103.12 is included under the Allegheny County Health Department's approved Title V operating permit program as well as the Federally Enforceable State Operating Permit (FESOP) program, which was approved by EPA as a revision to the Pennsylvania State Implementation Plan (SIP). See 68 FR 37973. *These emissions limits are established in accordance with §2103.12.a.2.B, are applicable requirements as defined by §2101.20, and are concurrently incorporated into the TVOP*.
> ***
> Short-term and annual emission limits may be needed as enforceable limits in State Implementation Plan (SIP) submittals. They are needed in modeling for significant impact levels. These limits are needed to determine regulatory applicability (e.g., NSR/PSD, stack testing (§2108.02)).

RTC at 2 (emphasis added).

The HCl and Total HAP emission limits at issue in Claim I were among many Draft Permit conditions based on this legal authority. *See* Draft Permit Conditions V.A.1.m. and p. (identifying Art. XXI § 2103.12.a.2.B as a basis for emission limits on HCl, Total HAP, and other pollutants).[40] In response to U.S. Steel's request to remove all such limits that applied to the Blast Furnace No. 1 and No. 3. Casthouse Baghouse, ACHD replied: "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*." RTC at 8 (emphasis added). This implies that ACHD would not remove any of these limits from the Permit. And, in fact, the limits on other pollutants for these units were retained in the Proposed and Final Permits. *See* Proposed Permit and Final Permit Conditions V.A.1.m. and p. However, ACHD removed the HCl and Total HAP limits from the Proposed and Final Permits. *See id*. The permit record contains no discussion about why these particular limits were removed.

From the record before the EPA, it is unclear why ACHD treated the Draft Permit limits on HCl and Total HAP from the Blast Furnaces and Casthouses differently from the limits on other pollutants. It appears that ACHD interprets the EPA-approved SIP provisions of Art. XXI § 2103.12.a.2.B as providing the authority to establish various limits through the title V permitting process when such limits are absent from underlying applicable requirements. But it is not clear whether ACHD interprets this

[39] The SIP goes on to define RACT as "any air pollution control equipment, process modifications, operating and maintenance standards, or other apparatus or techniques which may reduce emissions and which the Department determines is available for use by the source affected in consideration of the necessity for obtaining the emission reductions, the social and economic impact of such reductions, and the availability of alternative means of providing for the attainment and maintenance of the NAAQS's." ACHD Rules and Regulations Art. XXI § 2101.20.

[40] Note that the Draft, Proposed, and Final Permits also cite to § 2104.02.c.9.A as the authority for limits on these (and other) pollutants, all of which are included in a single table. The cited authority in section 2104.02 imposes limits on PM from primary iron and/or steel making facilities and does not appear relevant to the other pollutants contained in that table, including HCl and Total HAP.

regulation as *requiring* the County to establish these particular limits on HCl or Total HAP, or whether various qualifications in the SIP language give ACHD the *discretion* to establish limits on certain pollutants (*e.g.*, criteria pollutants) or emission units but not others (*e.g.*, HAP). It is possible that ACHD determined that the SIP provision at issue did not require the County to impose these particular limits—in other words, that these limits were not applicable requirements, or were not necessary to assure compliance with applicable requirements of the SIP—but nothing in the permit record documents or explains such a conclusion.

Overall, the permit record is unclear about whether emission limitations on HCl and Total HAP are applicable requirements (or are necessary to impose or assure compliance with applicable requirements of the SIP), and accordingly whether the Permit must include limits on those pollutants. 42 U.S.C. § 7661c(a); 40 C.F.R. §§ 70.6(a)(1), 70.8(c)(3)(ii). Thus, the EPA grants Claim I.

Direction to ACHD: ACHD must ensure that the Permit contains and assures compliance with all applicable requirements. With respect to the limits on HCl and Total HAP from the Blast Furnaces and Casthouses that were included in the Draft Permit, ACHD must address whether these particular limits are applicable requirements or are necessary to assure compliance with applicable requirements of the SIP. This will necessarily require ACHD to address and explain the extent to which these limits are (or are not) required by Art. XXI § 2103.12.a.2.B. If ACHD determines that these particular limits are not required, it must explain this decision.

If ACHD determines that these limits are required by Art. XXI § 2103.12.a.2.B and are applicable requirements for title V purposes, it must revise the Permit to include the limits and ensure that the Permit contains sufficient conditions (including monitoring requirements) to assure compliance with these limits. In so doing, ACHD should consider the issues raised in public comments challenging the sufficiency of the monitoring provisions initially associated with the limits established in the Draft Permit.

Claim J: The Petitioners Claim That "The Renewal Permit Eliminates All of the Hourly and Annual Limits on PM, $PM_{2.5}$, PM_{10}, NO_x, CO, and SO_2 from the Blast Furnace Gas Flare[] Without Justification."

Petition Claim: Similar to Claim I, the Petitioners recount that the Draft Permit included both hourly and rolling 12-month limits on PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and SO_2 for the Blast Furnace Gas Flare. Petition at 49 (citing Draft Permit Condition V.C.1.d). The Petitioners claim that these limits were inappropriately removed from the Permit. *Id*.

The Petitioners observe that the Draft Permit stated that these limits were derived from ACHD Art. XXI §§ 2104.03.a.2.B, 2104.02.b, and 2103.12.a.2.B, which are part of the EPA-approved SIP. *Id*. (citing Draft Permit Condition V.C.1.d). The Petitioners state that requirements of a federally enforceable SIP are "applicable requirements" for title V. *Id*. at 48 (citing 40 C.F.R. § 70.2). The Petitioners thus claim that these emission limits were applicable requirements, and that ACHD provided no rationale or evidence to the contrary. *Id*. at 49–50. The Petitioners contend that as applicable requirements, these limits must be included in the permit and supported by sufficient monitoring and testing requirements. *Id*. at 50 (citing to C.F.R. § 70.6(a)(1)).

The Petitioners assert that ACHD failed to provide a clear rationale for removing these limits from the Permit. *Id*. at 51. The Petitioners observe that U.S. Steel requested that ACHD remove the limits because the Blast Furnace Gas 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 Blast Furnace Gas flare according to a flare minimization plan." *Id*. at 51 (quoting RTC at 10). The Petitioners allege that ACHD accepted this change without providing any additional explanation. *Id*. The Petitioners contest the rationale supplied by U.S. Steel, arguing:

> 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.

Id. at 51–52.

EPA Response: For the following reasons, the EPA grants the Petitioners' request for an objection on this claim.

The issues underlying this claim are similar to those in Claim I, and the background provided in the EPA's response to that claim—including discussion of ACHD's authorities and obligations under Art. XXI § 2103.12.a.2.B—also applies here. The primary differences between Claims I and J are that (i) Claim J involves the removal of emission limits on criteria pollutants (instead of HCl and Total HAP) from the Blast Furnace Gas Flare[41] (instead of the Blast Furnaces and Casthouses); (ii) the Claim J limits removed from the Permit were based not only on Art. XXI § 2103.12.a.2.B, but also on 2104.02.b and 2104.03.a.2.B; and (iii) the permit record includes at least some explanation for the removal of the Claim J limits.

Specifically, ACHD removed the Blast Furnace Gas Flare emission limits after accepting U.S. Steel's position that limits should not be imposed on the flare because it is a safety device and because the flare is subject to a RACT-based flare minimization plan. RTC at 10; *see also* RTC at 19 ("[T]he blast furnace gas flare emissions table has been deleted from the permit because the flare is designed to flare excess blast furnace gas and function as a safety device and there is no limit on the excess gas that could be flared. In addition, the limit was based on the flare throughput/capacity, which is an over-estimation."); TSD at 69 ("There is no potential emissions limit for the flare because it is impossible to limit the amount of excess gas to combust.").

Here, notwithstanding U.S. Steel's explanation (adopted by ACHD), the permit record is unclear about whether hourly and rolling 12-month emission limitations on PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and SO_2 are applicable requirements or are necessary to impose or assure compliance with applicable requirements of the SIP. Specifically, it is unclear whether the fact that the Blast Furnace Gas Flare is purportedly a "safety device," or that the flare is designed to combust excess gas not combusted

[41] As the Petitioners observe, limits on PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and SO_2 emissions from the Blast Furnace Gas Flare were included within Condition V.C.1.d of the Draft Permit. This entire condition was removed from the Proposed and Final Permits.

elsewhere, is relevant to ACHD's authorities or obligations to establish limits under Art. XXI § 2104.03.a.2.B (discussed with respect to Claim I), § 2104.02.b (addressing PM emission limits),[42] or 2104.03.a.2.B (addressing SO_2 emission limits).[43]

Additionally, it is unclear whether the requirements of "RACT IP8a, which included the requirement to maintain and operate the [Blast Furnace Gas] flare according to a flare minimization plan" provide a basis for satisfying Art. XXI §§ 2103.12.a.2.B, 2104.02.b, or 2104.03.a.2.B, in lieu of the hourly and rolling 12-month emission limits in the Draft Permit. To the extent that such a flare minimization plan is relied upon to assure compliance with these SIP requirements, it must either be included or incorporated by reference into the title V permit. As the Petitioners correctly observe, this plan is not currently incorporated into the title V permit. *See* Permit Condition V.C.6 (requiring the Edgar Thomson Plant to maintain and operate the Blast Furnace Gas Flare according to a flare minimization plan and listing the required elements of such a plan, but not including or incorporating any of the substantive conditions of such plan); *see also, e.g.*, White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, 34–41 (March 5, 1996); *In the Matter of United States Steel Corp., Granite City Works*, Order to Petition No. V-2009-03 at 43 (January 31, 2011).

Overall, the permit record is unclear about whether hourly and 12-month emission limitations on criteria pollutants from the Blast Furnace Gas Flare are applicable requirements (or are necessary to impose or assure compliance with applicable requirements of the SIP), and accordingly whether the Permit must include these limits. 42 U.S.C. § 7661c(a); 40 C.F.R. §§ 70.6(a)(1), 70.8(c)(3)(ii). Thus, the EPA grants Claim J.

Direction to ACHD: ACHD must ensure that the Permit contains and assures compliance with all applicable requirements. With respect to the limits on PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and SO_2 from the Blast Furnace Gas Flare that were included in the Draft Permit, ACHD must address whether these particular limits reflect applicable requirements or are necessary to assure compliance with applicable requirements of the SIP. This will necessarily require ACHD to address and explain the extent to which these limits are (or are not) required by Art. XXI §§ 2103.12.a.2.B, 2104.02.b, or 2104.03.a.2.B. If ACHD determines that these particular limits are not required, it must explain this decision.

If ACHD decides that such limits are not necessary to satisfy Art. XXI § 2103.12.a.2.B due to the existence of other applicable requirements (such as the aforementioned flare minimization plan), it

[42] Section 2104.02.b. provides: "No person shall operate, or allow to be operated, any process except those processes listed in Subsection c[,] d, e, f, g, or h below and those processes for which a source standard is established under Part E of this Article in such manner that emissions of particulate matter from such process exceed seven (7) pounds in any 60 minute period or 100 pounds in any 24-hour period, except that no person subject to the requirements of this Subsection b shall be required to reduce emissions to a greater degree than 99 percent. This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article."

[43] Section 2104.03.a.2.B provides: "No person shall operate, or allow to be operated, any fuel-burning or combustion equipment in such manner that emissions of sulfur oxides, expressed as sulfur dioxide, exceed the following rates at any time: . . . B. Where the actual heat input to such equipment is equal to or greater than 50 million BTUs per hour, but less than 2000 million BTUs per hour, the rate determined by the formula: $A = 1.7E^{-0.14}$ where A = allowable emissions in pounds per million BTUs of actual heat input, and, E = actual heat input in millions of BTUs per hour; . . . ."

must ensure that the Permit appropriately includes or incorporates by reference such other applicable requirements.

If ACHD instead determines that these emission limits are required by Art. XXI §§ 2103.12.a.2.B, 2104.02.b, or 2104.03.a.2.B and are applicable requirements for title V purposes, it must revise the Permit to include the limits. If this is the case, ACHD must also ensure that the Permit contains sufficient conditions (including monitoring requirements) to assure compliance with these limits.

V. CONCLUSION

For the reasons set forth in this Order and pursuant to CAA § 505(b)(2) and 40 C.F.R. § 70.8(d), I hereby grant the Petition as described in this Order.

Dated: February 7, 2024

Michael S. Regan
Administrator