BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Petition No. IX-2024-20

In the Matter of

South32 Hermosa Inc., South32 Hermosa Project

Permit No. 96653

Issued by the Arizona Department of Environmental Quality

ORDER GRANTING IN PART AND DENYING IN PART A PETITION FOR OBJECTION TO A TITLE V OPERATING PERMIT

I. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) received a petition dated September 13, 2024, (the Petition) from the Center for Biological Diversity, Patagonia Area Resource Alliance, Sierra Club, Arizona Mining Reform Coalition, Calabasas Alliance/La Alianza Calabasas, and Friends of the Santa Cruz River (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. 96653 (the Permit) issued by the Arizona Department of Environmental Quality (ADEQ) to the South32 Hermosa Project (Hermosa) in Santa Cruz County, Arizona. The Permit was issued pursuant to title V of the CAA, 42 U.S.C. §§ 7661–7661f, and Title 18, Chapter 2, Article 3 of the Arizona Administrative Code (A.A.C.). *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 in part and denies in part the Petition and objects to the issuance of the Permit. Specifically, the EPA grants Claims 3, 5, 8, 11, and 16 and denies the rest of the claims.

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 state of Arizona submitted a title V program governing the issuance of operating permits in 1993. The EPA granted interim approval of ADEQ's title

V operating permit program in 1996. 61 Fed. Reg. 55910 (Oct. 30, 1996). The EPA granted full approval of Arizona's title V operating permit program in 2001. 66 Fed. Reg. 63175 (Dec. 5, 2001). This program, which became effective on November 30, 2001, is codified in Title 18, Chapter 2, Article 3 of the Arizona Administrative Code.

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

[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.*

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).

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

---

[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.

petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and 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 (September 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 (April 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 (March 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 (December 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 and objects to the issuance of a permit, 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).

C. New Source Review

The major New Source Review (NSR) program encompasses two core types of preconstruction permit requirements for major stationary sources. Part C of title I of the CAA establishes the Prevention of Significant Deterioration (PSD) program, which applies to new major stationary sources and major modifications of existing major stationary sources for pollutants for which an area is designated as

attainment or unclassifiable for the national ambient air quality standards (NAAQS) and for other pollutants regulated under the CAA. 42 U.S.C. §§ 7470–7479. Part D of title I of the Act establishes the major nonattainment NSR (NNSR) program, which applies to new major stationary sources and major modifications of existing major stationary sources for those NAAQS pollutants for which an area is designated as nonattainment. 42 U.S.C. §§ 7501–7515. The EPA has two largely identical sets of regulations implementing the PSD program. One set, found at 40 C.F.R. § 51.166, contains the requirements that state PSD programs must meet to be approved as part of a state implementation plan (SIP). The other set of regulations, found at 40 C.F.R. § 52.21, contains the EPA's federal PSD program, which applies in areas without a SIP-approved PSD program. The EPA's regulations specifying requirements for state NNSR programs are contained in 40 C.F.R. § 51.165.

While parts C and D of title I of the Act address the major NSR program for major sources, section 110(a)(2)(C) addresses the permitting program for new and modified minor sources and for minor modifications to major sources. The EPA commonly refers to the latter program as the "minor NSR" program. States must also develop minor NSR programs to, along with the major source programs, attain and maintain the NAAQS. The federal requirements for state minor NSR programs are outlined in 40 C.F.R. §§ 51.160 through 51.164. These federal requirements for minor NSR programs are less prescriptive than those for major sources, and, as a result, there is a larger variation of requirements in EPA-approved state minor NSR programs than in major source programs.

The EPA has approved Arizona's PSD, NNSR, and minor NSR programs as part of its SIP. *See* 40 C.F.R. § 52.120 (identifying EPA-approved regulations in the Arizona SIP). Arizona's major and minor NSR provisions, as incorporated into Arizona's EPA-approved SIP, are contained in portions of Arizona Administrative Code Title 18, Chapter 2.

Where the EPA has approved a state's title I permitting program (whether PSD, NNSR, or minor NSR), NSR permits issued following public notice and the opportunity for public comment and judicial review establish the NSR-related "applicable requirements" for the purposes of title V. As with "applicable requirements" established through other CAA authorities, the terms and conditions of those permits should be incorporated into a source's title V permit without a further round of substantive review as part of the title V process. The EPA has explained and reiterated this interpretation in numerous orders. *See, e.g., In the Matter of Big River Steel, LLC*, Order on Petition No. VI-2013-10 at 8–20 (Oct. 31, 2017) (*Big River Steel Order*). The EPA also recently proposed regulatory revisions to codify this approach; the preamble to that proposed rulemaking explains at length the legal and policy underpinnings of this approach. *See Clarifying the Scope of "Applicable Requirements" Under State Operating Permit Programs and the Federal Operating Permit Program*, 89 Fed. Reg. 1150, 1160–84 (January 9, 2024) ("proposed Applicable Requirements Rule")) Accordingly, the EPA will generally not consider the merits of a permitting authority's NSR permitting decisions in a petition to object to a

source's title V permit. *See Big River Steel Order* at 8–9, 14–20.[10] Rather, any such challenges should be raised through the appropriate title I permitting procedures or enforcement authorities.

III. BACKGROUND

A. The Hermosa Facility

The Hermosa Project, owned by South32 Hermosa Inc., is a zinc, lead, manganese, and silver mine located in Santa Cruz County, Arizona. The facility consists of two underground mining sites—the Taylor and Clark sites—and is a title V major source of nitrogen oxides (NO_x), carbon monoxide, particulate matter (PM), volatile organic compounds (VOC), and hazardous air pollutants. Emission units at the facility include metallic mineral processing equipment, natural gas-fired and diesel internal combustion engines used for power supply, storage tanks, and various other operations. Among other requirements, the facility is subject to New Source Performance Standards (NSPS) under 40 C.F.R. part 60 subparts LL, IIII, and JJJJ and National Emission Standards for Hazardous Air Pollutants under 40 C.F.R. part 63 subpart ZZZZ.

B. Permitting History

On October 24, 2022, South32 Hermosa applied for an initial title V permit for the Hermosa Project. ADEQ published notice of a draft permit on January 5, 2024, subject to a public comment period that ran until February 26, 2024. On June 10, 2024, ADEQ submitted the Proposed Permit, along with its responses to public comments (RTC) and technical support document (TSD), to the EPA for its 45-day review. The EPA's 45-day review period ended on July 25, 2024, during which time the EPA did not object to the Proposed Permit. ADEQ issued the final title V permit for the Hermosa Project on August 26, 2024.

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 45-day review period expired on July 25, 2024. Thus, any petition seeking the EPA's objection to the Permit was due on or before September 23, 2024. The Petition was submitted September 13, 2024. Therefore, the EPA finds that the Petitioners timely filed the Petition.

---

[10] However, as the EPA noted in the *Big River Steel Order*, there may be circumstances that "warrant a different approach." *Big River Steel Order* at 11 n.20. Additionally, even in situations where this approach applies, the EPA does view monitoring, recordkeeping, and reporting to be part of the title V permitting process and will therefore continue to review whether a title V permit contains monitoring, recordkeeping, and reporting provisions sufficient to assure compliance with the terms and conditions established in a preconstruction permit. *See, e.g., In the Matter of South Louisiana Methanol, LP,* Order on Petition Nos. VI-2016-24 and VI -2017-14 at 10–11 (May 29, 2018) (*South Louisiana Methanol Order*); *Big River Steel Order* at 17, 17 n.30, 19 n.32, 20. Moreover, as the EPA has explained, "[A] decision by the EPA not to object to a title V permit that includes the terms and conditions of a title I permit does not indicate that the EPA has concluded that those terms and conditions comply with the applicable SIP or the CAA. However, until the terms and conditions of the title I permit are revised, reopened, suspended, revoked, reissued, terminated, augmented, or invalidated through some other mechanism, such as a state court appeal, the 'applicable requirement' remains the terms and conditions of the issued preconstruction permit and they should be included in the source's title V permit." *Big River Steel Order* at 19.

IV. EPA DETERMINATIONS ON PETITION CLAIMS

The Petition contains two sections under the heading "Grounds for Objection"—section I, addressed in this Order in Claim 1, and section II, addressed in this Order in Claims 2–20. Section II comprises two subsections: section II.A, titled "Clean Air Act Background," which lays out the legal background for the permit-specific claims that follow, and section II.B, titled "Emission Limitations and Standards in the Title V Permit are Unenforceable and/or Fail to Assure Compliance with Applicable Requirements." Section II.B encompasses challenges to several dozen individual permit terms (all within Attachment "B" of the Permit). The Petitioners organize these challenges permit term-by-permit term and repeat many identical arguments for similar permit terms throughout the Petition. The EPA has reorganized these challenges into 19 claims based on distinct issues raised by the Petitioners.

A. Claim 1: The Petitioners Claim That "ADEQ Did Not Properly Characterize Fugitive Versus Non-Fugitive Emissions and Erroneously Determined the Hermosa Mine Was Not Subject to Clean Air Act Prevention of Significant Deterioration Permitting, Contrary to the Arizona SIP."

This claim is found within section I of the Petition.

Petition Claim: The Petitioners claim that the Permit fails to include applicable requirements related to PSD permitting because ADEQ incorrectly determined that the Hermosa Facility was not a major source of PM for PSD purposes based on flawed characterizations of certain PM emissions as fugitive emissions. Petition at 6; *see id.* at 6–14.

The Petitioners first summarize PSD permitting requirements under the CAA and the Arizona SIP, noting that major sources under the PSD program are subject to best available control technology requirements, among others. *Id.* at 6–7 (citing 42 U.S.C. § 7475; 40 C.F.R. § 51.166; A.A.C. R18-2-402(B); R18-2-406(A)(5); R18-2-406(A)(1); and R18-2-410). The Petitioners state that "the Title V Permit for the Hermosa Mine must assure compliance with the Arizona SIP." *Id.* at 13 (citing 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.2).

The Petitioners acknowledge that fugitive emissions are not counted toward the major source PSD permitting thresholds for unlisted sources, and that the Hermosa Project is an unlisted source. *Id.* at 7 (citing A.A.C. R18-2-101(23); A.A.C. R18-2-401(13)(b); 40 C.F.R. § 51.166(b)(1)(i)(a) and (b)). The Petitioners quote the definition of fugitive emissions in the Arizona SIP (A.A.C. R18-2-101(59)) as emissions "which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening," arguing that the determination of whether emissions are fugitive must be based on an assessment of whether emissions can reasonably be collected and passed through such openings. *Id.* (citing *Interpretation of the definition of fugitive emissions in Parts 70 and 71*, Memo from Thomas C. Curran to Judith Katz at 2 (Feb. 10, 1999)). The Petitioners claim that the EPA has generally held that where emission collection technology is in use by other sources within the same source category or by a similar pollutant emitting activity, there is a presumption that collection is reasonable. *Id.*

The Petitioners argue that ADEQ erroneously categorized PM emissions from certain drops and stockpiles at the facility as fugitive when they appear to be non-fugitive because, as the Petitioners

claim, the emissions can reasonably be collected and passed through openings. *Id.* at 8. With regard to drops, the Petitioners point out that the facility uses dust collection systems to control PM emissions from some drops. *Id.* at 9–10. The Petitioners also provide examples of companies that offer dust collection systems for the mining industry, arguing that all drops can be controlled in this manner and, therefore, that their emissions are non-fugitive. *Id.* Similarly, the Petitioners note that some of the drops that are listed in the Permit Application as sources of fugitive emissions will be partially enclosed. *Id.* at 10. With regard to stockpiles, the Petitioners claim that stockpiles can be enclosed and that their emissions can be collected. *Id.* at 10–11. The Petitioners provide an example of a company that offers stockpile enclosures and an example of an enclosed stockpile listed in a permit application for a different mine in Arizona. *Id.* (citing Petition Exhibit 13 *Bulk Storage Domes — Geometrica* available at: *https://www.geometrica.com/en/bulk-subsection-english*; Petition Ex. 14 Trinity Consultants, *ADEQ Class II Permit Application, Copper World Project* at 2–6 (October 2022)).

The Petitioners then add the fugitive PM emissions from these drops and stockpiles to the non-fugitive PM emissions total to claim that if fugitive emissions were properly characterized as non-fugitive, the potential to emit for the Hermosa Mine would exceed PSD permitting thresholds for PM. *Id.* at 11–12.

Addressing ADEQ's RTC, the Petitioners allege that ADEQ simply asserted without further explanation that it "characterized fugitive and non-fugitive emissions accurately in the proposed air quality permit." *Id.* at 13 (quoting RTC at 16).

In conclusion, the Petitioners state: "The Administrator must object over the failure of ADEQ to comply with [the] SIP when characterizing fugitive emissions, calculating potential to emit, and in determining the Hermosa Mine was not a major source subject to PSD permitting." *Id.* at 14.

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

Claim 1 challenges ADEQ's determinations regarding which NSR requirements are the applicable requirements of the SIP that apply to the construction of the facility. As noted in Section II.C of this Order, the EPA's position on whether challenges to permit conditions based on NSR preconstruction permitting authority under title I of the CAA should be considered by the EPA in addressing a petition to object to a title V operating permit under CAA § 505(b)(2) can be summarized as follows: where a permitting authority authorizes the construction of a facility by issuing an NSR permit that was subject to public notice and comment and an opportunity for judicial review, the terms and conditions of that NSR permit define the "applicable requirements" of the SIP for purposes of title V permitting and are not subject to review at the time of incorporation into the source's title V permit. The title V permitting process is not the appropriate forum to review preconstruction permitting issues, even when the permit conditions based on title I requirements were developed at the same time as the title V permit.

This interpretation is explained more fully in the proposed Applicable Requirements Rule, 89 Fed. Reg. at 1160–84, the *Big River Steel Order*, and many subsequent orders. The circumstances here closely

resemble those the EPA considered in the *SRP Coolidge*,[11] *Waelz*,[12] *Riverview*,[13] *Yuhuang II*,[14] and *Big River Steel Orders*. In each of those cases, the title I-based NSR preconstruction authorizations and permit terms were developed at the same time as the title V permit terms, and all of the resulting requirements were included in the same permit document.

As explained in those orders, even where NSR and title V permit authorizations are contained within one permit document, such a permit action actually reflects two legally distinct permit actions by the state: (i) a preconstruction permit issued under the EPA-approved title I SIP regulations governing NSR, and (ii) an operating permit under EPA-approved part 70 regulations governing title V. Again, NSR permits and title V permits are based on different statutory and regulatory schemes, and although the two programs feature similarities, they also feature important substantive and procedural differences. A permitting authority's decision to increase administrative efficiency by issuing a single permit document to satisfy the legal requirements of two distinct permitting programs does not alter the applicability of requirements associated with each respective program. For example, substantive requirements unique to NSR would not be applied by the EPA to establish or evaluate non-NSR-based title V permit terms. Likewise, procedural requirements unique to title V (including the EPA's objection authority and public petition opportunity, among other things) would not be extended by the EPA to review substantive elements of the permit action unique to the NSR permitting process. The EPA's objection authority, and the public's ability to petition the EPA to object, are confined by the CAA to title V permits. *See* 42 U.S.C. 7661d(b). Combining the procedures by which a permitting authority issues NSR and title V permits does not alter this basic principle. *See SRP Coolidge Order* at 12–13; *Waelz Order* at 13–15; *Riverview Order* at 24–28; *Yuhuang II Order* at 7–8; *Big River Steel Order* at 11–12).[15]

Having considered the Permit at issue, the EPA finds that the same logic and legal principles articulated in *SRP Coolidge*, *Waelz*, *Riverview*, *Yuhuang II*, and *Big River Steel* apply to the combined NSR and title V permit ADEQ issued to the Hermosa Project. A title V petition is not the appropriate forum for reviewing the merits of the Petitioners' NSR-related claims, notwithstanding ADEQ's decision to issue a single permit document that contains both NSR- and title V-based requirements.

Notably, the EPA's conclusion here is consistent with the EPA-approved regulations in the Arizona SIP that ADEQ relied on in this permit action. These regulations provide that combined ("unitary") Class I permits in Arizona (like the Permit issued to Hermosa) include two legally distinct components: (i) an NSR preconstruction authorization based on title I of the CAA that takes effect *before* the EPA reviews the proposed permit, and (ii) an operating permit authorization under title V of the CAA that takes effect *after* the EPA reviews the proposed permit. See A.A.C. R18-2-101.115; R18-2-302.G; R18-2-334.B; R18-2-402.C. The SIP explains: "'Proposed final permit' means the version of a Class I permit or

---

[11] *In the Matter of Salt River Project Agricultural Improvement and Power District, Coolidge Generating Station*, Order on Petition No. IX-2024-7 (September 11, 2024).

[12] *In the Matter of Waelz Sustainable Products, LLC*, Order on Petition No. V-2021-10 (March 14, 2023).

[13] *In the Matter of Riverview Energy Corp.*, Order on Petition No. V-2019-10 (March 26, 2020).

[14] *In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition Nos. VI-2017-5 & VI-2017-13 (April 2, 2018).

[15] The Petitioners neither acknowledge these previous title V orders nor offer any argument to rebut or challenge the legal principles articulated therein. Similarly, the Petitioners do not attempt to explain why the reasoning in those orders should not be applied to the Hermosa Permit. In other words, the Petitioners do not offer any reason or argument as to why the EPA should review the Petitioners' challenges to ADEQ's NSR permitting decisions in this title V petition proceeding, despite the well-established precedent that it is not appropriate to do so.

Class I permit revision that the Department proposes to issue and forwards to the Administrator for review in compliance with R18-2-307(A). A proposed final permit constitutes a final and enforceable authorization to begin actual construction of, but not to operate, a new Class I source or a modification to a Class I source." A.A.C. R18-2-101.115; *see also* A.A.C. R18-2-302.G (similar text). Thus, in the case of a unitary Class I permit, the SIP provides that the title I-based NSR part of the permit—the authorization to construct—is effective at the time the "proposed final permit"[16] is sent to the EPA for review. By contrast, the title V part of the permit—the authorization to operate—is not effective until after the EPA reviews the proposed final permit and the permitting authority subsequently issues the final permit. *See* A.A.C. R18-2-101.55 ("'Final permit' means the version of a permit issued by the Department after completion of all review required by this Chapter."); *see* A.A.C. R18-2-307 (requirements for EPA review, among other things).

In summary, in issuing a permit under the EPA-approved title I SIP regulations governing NSR, ADEQ established the NSR-related "applicable requirements" of the SIP for the Hermosa Project. The fact that ADEQ did this within a combined NSR and title V permit does not alter this principle. Rather, given that the NSR-based applicable requirements are included verbatim in the facility's title V permit (by virtue of the single permit document), it is clear that the title V permit faithfully incorporates those applicable requirements. Thus, the Petitioners have failed to demonstrate that the Permit is "not in compliance with the applicable requirements," and the EPA denies Claim 1. 42 U.S.C. § 7661d(b)(2).

B. Claim 2: Undefined Terms in Operational Throughput Limits

This claim is found within section II.B.1 in the Petition.

Petition Claim: The Petitioners challenge eight permit conditions (Attachment "B," Conditions II.D.1.e, II.D.1.f, II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, II.D.2.f, and II.D.2.g) that establish operational throughput limits on mining activity and various equipment at the facility because undefined terms in each condition allegedly render them unenforceable as a practical matter. *See* Petition at 13–23. The Petitioners argue that terms for the activity or material limited by each condition are not defined in the Permit, and it is not otherwise clear to what these terms refer. *See id.*

Specifically, the Petitioners claim that the following terms in the following conditions are undefined and unclear: "development ore" and "mined" in Condition II.D.1.e; "stope ore" and "mined" in Condition II.D.1.f; "rock" in Conditions II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, and II.D.2.g; "Rock Breaker"[17] and "processed" in Condition II.D.2.e; and "ore" and "mined" in Condition II.D.2.f. *Id.* at 15–17, 19–22. The Petitioners argue that it is not clear how the permittee will identify the materials subject to limits such that it will be able to demonstrate compliance with the throughput limits. *Id.*

Addressing ADEQ's response in its RTC, which stated that definitions "can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations" or "are commonly used and thus, they are also readily available online," the Petitioners claim to have reviewed the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations without finding the

---

[16] The "proposed final permit" in the Arizona regulations is analogous to the "proposed permit" as defined in the EPA's regulations. *See* 40 C.F.R. § 70.2.

[17] The Petitioners note that no "Rock Breaker" unit is identified in the Permit and state: "it does not appear that the Title V Permit explicitly authorizes the construction and operation of a 'Rock Breaker.'" *Id.* at 20.

definitions of the terms in question. *Id.* at 17–23 (quoting RTC at 13). The Petitioners also claim that no other response addressed their "concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter." *Id.* at 17.

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

The EPA has confronted the issue of allegedly unclear permit terms in numerous previous orders. The EPA has clarified that "[p]ermits typically do not include a list of all relevant definitions, nor is that required by any applicable requirement." *In the Matter of Louisville Gas and Electric Company, Trimble County*, Order on Petition at 24 (September 10, 2008). Generally, the petitioner must show that the vagueness or ambiguity resulting from an undefined term leads directly to a flaw in the permit in order to demonstrate grounds for an EPA objection. For example, the EPA has granted a petition claim where ambiguity rendered monitoring conditions insufficient to assure compliance with emission limits. *See In the Matter of Mountain Coal Co., LLC, West Elk Mine*, Order on Petition No. VIII-2024-3 at 31–34 (May 24, 2024). The EPA has also denied petition claims where the undefined term is a "commonly used regulatory term, and the plain meaning of the term is clear"[18] or where the petitioner failed to explain why a term was so vague or subject to multiple interpretations as to render a permit condition unenforceable as a practical matter. *See In the Matter of Piedmont Green Power, LLC, Barnesville, Lamar County*, Order on Petition No. IV-2015-2 at 25 (December 13, 2016).

Here, the Petitioners allege that such terms as "mined," "rock," "ore," etc. are ambiguous, and, therefore, the throughput limits on related activities in Condition II.D of the Permit are unenforceable as a practical matter. However, these terms are commonly used in the mining industry and their meaning in the context of the Hermosa Project is relatively clear. For example, the daily limit on "total rock processed by the Primary Crusher" at the Taylor site established by Condition II.D.1.g is clearly a limit on all the material passed through the Primary Crusher. The TSD describes the Primary Crushing System at the Taylor site thus:

> Ore is fed directly into the crusher through an underground ore pass. This crushed material is then fed onto conveyor belt. The crushed ore is then conveyed to one of three bins from where it is metered onto conveyers which feed the shaft skips that transport the ore vertically to the surface. Once deposited in an aboveground bin adjacent to the shaft, ore is conveyed to the coarse ore storage silos.

TSD at 4. The TSD also clarifies that the Rock Breaker is part of the Primary Crusher at the Clark Site. *Id.*

The Permit Application contains numerous site and process flow diagrams that provide more details relevant to the limits in Condition II.D. The Petitioners do not address any of this information in the permit record in considering the meaning of specific terms. Nor have the Petitioners demonstrated that the terms in question are subject to multiple interpretations that would render any specific condition unenforceable as a practical matter. The EPA, therefore, denies Claim 2.

---

[18] *In the Matter of Midwest Generation, LCC, Crawford Generating Station*, Order on Petition No. V-2004-2 at 19 (March 25, 2005).

C. Claim 3: Monitoring of Operational Throughput Limits

This claim is found within section II.B.1.h in the Petition.

Petition Claim: The Petitioners claim that the Permit "does not set forth sufficient periodic monitoring to assure compliance" with the operational throughput limits in Conditions II.D.1.e, II.D.1.f, II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, II.D.2.f, and II.D.2.g. Petition at 23 (citing 40 C.F.R. §§ 70.6(a)(3)(i)(B) and (c)(1)); *see id.* at 23–25.

The Petitioners focus on the recordkeeping required by Condition II.D.4.b, arguing that key terms are unclear and not aligned with terms used in the limits on mining activity in Conditions II.D.1 and II.D.2. *Id.* at 23. The Petitioners also claim that the monitoring is deficient because "it does not set forth any specific method or means of measuring" daily rock mined. *Id.* at 24.

Moreover, the Petitioners allege that the Permit does not otherwise set forth any monitoring to assure compliance with other provisions of Condition II.D (*i.e.*, the limit on development ore mined in Condition II.D.1.e, the limit on stope ore mined in Condition II.D.1.f, the limits on rock processed by the Primary Crushers at the Taylor and Clark sites in Conditions II.D.1.g, II.D.1.h, and II.D.2.g, the limit on rock processed by the Pebble Crusher in Condition II.D.1.i, and the limit on rock processed by the Rock Breaker in Condition II.D.2.e). *Id.*

Finally, the Petitioners claim it is not clear whether ADEQ responded to their comments on these issues, but a general response indicating that the Permit's monitoring is adequate and its terms are enforceable did not resolve, or even speak directly to, their concerns. *Id.* at 25 (citing RTC at 8).

EPA Response: For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

All title V permits must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c); *see* 40 C.F.R. § 70.6(c)(1). Determining whether monitoring contained in a title V permit is sufficient to assure compliance with any term or condition is a context-specific, case-by-case inquiry.

Here, the Permit sets operational limits on specific types of ore mined at the Taylor site (in Conditions II.D.1.e and II.D.1.f), on total ore mined at the Clark site (in Condition II.D.2.f), and on rock processed by various equipment at both sites (in Conditions II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, and II.D.2.g). Permit at 20–22.

Condition II.D.4.b requires Hermosa to keep records of "the total tons of daily rock mined (including ore and waste rock)." However, this recordkeeping requirement neither distinguishes between development and stope ore, nor between ore mined at the two sites, whereas the operational limits expressly distinguish between the types of ore mined and the location. Records of the total tons of daily rock mined across the entire mine might or might not include the information needed to determine compliance with the limits on development ore and stope ore mined at the Taylor site and total ore mined at the Clark site.

As the Petitioners point out, the Permit appears to not contain any other monitoring or recordkeeping requirements related to the operational throughput limits in Condition II.D. ADEQ's permit record, including the RTC, also does not identify any specific compliance assurance provisions for the throughput limits. The Permit, therefore, does not "set forth . . . monitoring . . . requirements to assure compliance" with those limits. 42 U.S.C. § 7661c(c); *see* 40 C.F.R. § 70.6(c)(1).

Direction to ADEQ: ADEQ must amend the Permit to add monitoring, recordkeeping, and reporting requirements sufficient to assure compliance with the operational limits on specific types of ore mined at the Taylor site (in Conditions II.D.1.e and II.D.1.f), on total ore mined at the Clark site (in Condition II.D.2.f), and on rock processed by various equipment at both sites (in Conditions II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, and II.D.2.g). Recordkeeping can, in some circumstances, be an acceptable type of monitoring, but it must "yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B).

D. Claim 4: PM and Opacity Emission Locations

This claim is found within sections II.B.2.a, II.B.2.i, and II.B.6.a in the Petition.

Petition Claim: The Petitioners claim that several Conditions (III.A.2, III.A.4, and VII.B) that limit or provide monitoring for PM emissions or opacity are unenforceable because they fail to identify in sufficient detail the physical source of emissions from individual emission units subject to the limits. *See* Petition at 26, 28, 48, 113–114.

The Petitioners note that the Permit identifies units in the equipment list in Attachment "C" of the Permit and specifies which requirements are applicable to each unit. *Id.* at 26. However, the Petitioners claim that "it is not clear based on this list where particulate matter is emitted in order to assure compliance with the applicable limits." *Id.* Similarly, in relation to opacity limits, the Petitioners allege that the Permit fails to identify where monitoring must occur to assure compliance. *Id.* at 28, 48. Furthermore, the Petitioners insist that the Permit must specify a single location where monitoring will occur for each unit and cannot list options for that location. *Id.* at 48 (citing Condition III.A.4.b; Permit at 29). The Petitioners also criticize Condition VII.B.1.b for not detailing the location of the stack of each affected source. *Id.* at 113–114.

Additionally, the Petitioners claim that several units[19] subject to the PM limit in Condition III.A.2.a are not listed in the Permit Application as having the potential to emit PM, arguing that this "makes it is [sic] unclear how the Title V Permit governs these units as it relates to compliance." *Id.* at 26.

Addressing ADEQ's statement in the RTC that "[c]onditions across the proposed air quality permit indicate whether an emissions source has a stack," the Petitioners acknowledge that some units have exhaust points but argue that the Permit does not comprehensively indicate whether this is the case for all sources. *Id.* at 115 (quoting RTC at 21).

---

[19] *I.e.*, "Primary Mill" (Equipment ID No. 22110-ML-00001), "Secondary Mill" (Equipment ID No. 22120-ML-00001), "Lead Regrind Mill" (Equipment ID No. 22320-ML-00001), "Zinc Regrind Mill" (Equipment ID No. 22320-ML-00002), and "Primary Mill Feed Chute" (Equipment ID No. 22110-CH-00001) at the Taylor site. *Id.* at 26.

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

The Petitioners fail to demonstrate that the level of additional detail they request on the discrete locations of emissions is necessary to clarify the applicability of, ensure the enforceability of, or assure compliance with, any specific applicable requirement. For example, Condition III.A.2.a limits "the discharge of particulate matter into the atmosphere . . . from any process source," meaning that the limit applies to *all* PM emitted from *any* location at the subject sources. Similarly, Condition III.A.2.b limits "[t]he opacity of any plume or effluent from any existing, stationary, point source," meaning the limit applies to *all* plumes or effluents from subject sources. The Petitioners claim generally that the Permit does not specify the locations of emissions from sources subject to PM and opacity limits or indicate comprehensively whether certain sources have stacks. However, they neglect to present any arguments as to why the Permit *must* contain such detailed information in order to assure compliance with the Permit's terms. The Petitioners provide no analysis relevant to any specific emission unit to explain why the information they request is necessary to assure compliance with any limit (*e.g.*, whether emissions measurements would be expected to be significantly different in different locations), nor do they cite any authority that would compel the Permit to otherwise include the information. *See* 40 C.F.R. § 70.12(a)(2)(ii), (iii).

The Petitioners also fail to connect their concerns about the Permit Application—*i.e.*, that certain units in the Permit subject to the PM limit in Condition III.A.2.a were not identified in the application as having the potential to emit PM—to any flaw in the Permit. The Permit clearly lists these units as subject to the PM limit, and the permittee must, therefore, demonstrate compliance for these units, as required by the Permit, in the same way as for every other unit subject to the limit (including those identified in the Permit Application as having the potential to emit PM). The Petitioners fail to demonstrate that the Permit is flawed because it subjects more units to the emission limit than were identified in the Permit Application. The EPA, therefore, denies Claim 4.

E. Claim 5: Incorporation of PM Limits as Equations

This claim is found within sections II.B.2.a and II.B.6.a in the Petition.

Petition Claim: The Petitioners claim that the Permit fails to establish enforceable PM emission limits for metallic mineral processing operations sources subject to Condition III.A and unclassified sources subject to Condition VII.B. Petition at 27 and 112; *see id.* at 27–29, 112–115.

The Petitioners note that the Permit incorporates PM emission limits in Conditions III.A.2.a(1) and VII.B.1.a as one of two equations that apply to individual units based on their "process weight rate." *Id.* at 27 and 112. Claiming that this method of incorporation is unacceptable, the Petitioners state: "ADEQ was required to identify which sources are subject to the applicable equations and do the math to establish applicable particulate matter limits in the Title V permit." *Id.*

The Petitioners point out what they take to be a typographical error in Condition VII.B.1.a, noting that "[t]he equation set forth in Condition VII.B.1.a(1) of the final Title V Permit states 'E = $4.10e^{0.067}$,' but it appears that the variable, 'e,' was mistakenly inserted and should actually be the variable, 'P.'" *Id.* at 112.

The Petitioners argue that the Permit is unclear regarding the meaning of "process weight rate" and how it functions as part of the PM limits, specifically whether it is a fixed value based on the throughput capacity of each unit, or a variable that fluctuates based on actual throughput measurements. *Id.* at 27 and 112. Quoting a definition of "process weight rate" in the Arizona SIP (at A.A.C. R18-2-702(F)), the Petitioners claim that it must be a variable determined by the operations of each unit over a given time frame. *Id.* at 27–28, 112–113. Because the Permit fails to define this variable for each unit, the Petitioners claim it is impossible to determine the applicable PM limits, and they are, therefore, unenforceable as a practical matter. *Id.* at 28, 113. Additionally, the Petitioners point out that the Permit lists the maximum capacity for several units[20] subject to the PM limits in units of volume, not mass, and argue that the permit record lacks the information to make the necessary conversion to calculate the "process weight rate" for these units. *Id.*

Moreover, the Petitioners claim that the Permit (in Condition III.A.4.a) does not appear to require monitoring of "process weight rate." *Id.* at 46. The Petitioners note that Condition III.A.4.a requires the facility to "record the daily process rates and hours of operation of all material handling facilities" but argue it is unclear whether or how this recordkeeping is related to the "process weight rate" variable. *Id.* The Petitioners also claim that this recordkeeping is insufficient because it is "not clear what methodology and/or equipment will be used to reliably and accurately measure 'daily process rates' such that compliance can be assessed." *Id.*

Finally, addressing ADEQ's RTC, the Petitioners claim ADEQ did not provide a direct response concerning the definition of "process weight rate," or how to calculate it for units with volumetric throughput, just a response asserting that "the equations are part of the applicable regulations." *Id.* at 29, 114–115 (quoting RTC at 20).

EPA Response: For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

CAA section 504(a) requires all title V permits to "include enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements." 42 U.S.C. § 7661c(a); *see* 40 C.F.R. § 70.6(a)(1). 40 C.F.R. § 70.2 defines applicable requirements "as they apply to emissions units in a part 70 source." One of the primary purposes 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. at 32251. Thus, a title V permit compiles, in a single document, all of the air quality control requirements as they apply to the source's emission units such that applicability and compliance obligations are clear.

Here, the Permit contains limits on PM emissions applicable to metallic mineral processing operations and unclassified sources, in Conditions III.A.2.a(1) and VII.B.1.a, expressed as the following equations:

---

[20] *I.e.*, "Paste Plant Binder Silo 1" (Equipment ID No. DC-PPBS1), "Paste Plant Binder Silo 2" (Equipment ID No. DC-PPBS3), "Paste Plant Binder Silo 3" (Equipment ID No. DC-PPBS3), "Paste Plant Binder Silo 4" (Equipment ID No. DC-PPBS4), "Paste Plant Module 1 Mixer" (Equipment ID No. DC-PPM1M), "Paste Plant Module 2 Mixer" (Equipment ID No. DC-PPM2M), "WTP2 Cooling Towers," the "Surface Refrigeration Plant," and the "Evaporators."

> For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation: $E = 4.10[P]^{0.67}$
> Where:
> E = the maximum allowable particulate emissions rate in pounds-mass per hour; and
> P = the process weight rate in tons-mass per hour.
>
> For process sources having a process weight greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:
> $E = 55.0P^{0.11} - 40$
> Where "E" and "P" are defined as indicated [above].

Permit at 23, 77.[21]

The Petitioners claim that ADEQ was required to solve the equations "to establish applicable particulate matter limits" for each individual unit subject to the limits. Petition at 27. In making this request, the Petitioners seem to misunderstand the nature of the limits in question. The limits seem to be structured to fluctuate according to the operations of each unit subject to them—based on the unit's process weight rate. Title V does not prohibit the incorporation of emission limits that are expressed as equations that depend on operational variables, as the Petitioners suggest. There is nothing inherently unenforceable about limits structured in such a manner, as long as the Permit clearly explains how to solve the equations (*i.e.*, how to determine the numerical limits applicable to each unit) and how to demonstrate compliance with the limits.

Notably, the Petitioners also claim that the Permit is unclear regarding the critical operational variable that determines the emission limits for each unit subject to Conditions III.A.2.a(1) and VII.B.1.a: namely their process weight rate. As the Petitioners suggest, the records of "daily process rate" required by Condition III.A.4.a are likely related to the process weight rate variable. However, as the Petitioners demonstrate, the Permit does not clearly link the two or explain how to establish each unit's process weight rate (expressed in units of tons-mass per hour) from each unit's daily process rate, especially for units whose capacity is expressed in units of volume. The Permit also does not explain how and how often to calculate the PM limits for individual units. Although the limits are expressed in units of pounds-mass per hour, it is unclear if these limits are re-calculated hourly, daily (as the process rates are recorded), or at some other interval. Similarly, the Permit fails to explain how and how often the permittee demonstrates compliance with the limits by calculating the actual values of PM emissions.

ADEQ's permit record provides no further clarity. ADEQ's response in its RTC simply asserts that the equations are copied from applicable requirements. *See* RTC at 20.

---

[21] It appears that the Petitioners are correct in pointing out the typographical error in Condition VII.B.1.a(1). This condition currently includes the equation $E = 4.10e^{0.67}$, but was likely intended to include the equation $E = 4.10P^{0.67}$. Although this issue was not raised with reasonable specificity in public comments, and therefore is not part of the EPA's objection on this claim, the EPA, nevertheless, encourages ADEQ to revise the Permit to fix this error in the course of responding to the EPA's objections in this Order. *See* 40 C.F.R. §§ 70.8(d); 70.12(a)(2)(v).

The Permit does not provide enough information to determine how the process weight rate limits in Conditions III.A.2.a(1) and VII.B.1.a apply to individual units. The Permit, therefore, fails to adequately incorporate the limits and assure compliance with them in accordance with CAA section 504(a), (c) and 40 C.F.R. § 70.6(a)(1), (c)(1).

Direction to ADEQ: ADEQ must ensure that the Permit clearly identifies and assures compliance with the applicable requirements for each emission unit. 42 U.S.C. § 7661c(a), (c); *see* 40 C.F.R. §§ 70.2 (definition of "applicable requirement"), 70.6(a)(1), (c)(1). ADEQ must revise the Permit and, if necessary, the permit record, to clarify how the process weight rate limits in Conditions III.A.2.a(1) and VII.B.1.a operate sufficient to ensure their enforceability. ADEQ should indicate how and how often the process weight rate variable and the PM limits are determined for each unit and how and how often the source demonstrates compliance with the limits. If there are other requirements in the Permit that assure compliance with these limits (*e.g.*, operational throughput limits, emission control work practices, opacity limits, etc.), ADEQ should make that clear.

F. Claim 6: Uncombined Water Exemption to Opacity Limits

This claim is found within sections II.B.2.a and II.B.6.a in the Petition.

Petition Claim: The Petitioners claim that an exemption for opacity limits (in Conditions III.A.2 and VII.B) based on the presence of uncombined water renders the opacity limits unenforceable because the Permit lacks monitoring for uncombined water. *See* Petition at 29, 114. The Petitioners state that "the Title V Permit must set forth sufficient monitoring of 'uncombined water' in order to verify the presence of 'uncombined water' and its contribution to any exceedance of the 20% opacity limit. Without monitoring, this exemption is not enforceable and does not assure compliance with applicable requirements." *Id.*

The Petitioners acknowledge ADEQ's response in its RTC that defined uncombined water but claim the response did not resolve the issue of the lack of monitoring for uncombined water. *Id.* at 30, 115.

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

In response to the Petitioners' comments on this issue, ADEQ states:

> Under Arizona Administrative Code R18-2-101.99 and 148, particulate matter emissions are defined as "finely divided solid or liquid materials other than uncombined water." Uncombined water is defined as "condensed water containing analytical trace amounts of other chemical elements or compounds." Uncombined water does not contribute to particulate matter emissions. If there is an opacity exceedance, the facility can make a demonstration that the opacity exceedance was caused by uncombined water. Otherwise, the Department will treat it as a violation and take appropriate action to remedy the violation.

RTC at 17.

The compliance assurance method employed for the opacity limits in the Permit, EPA Method 9, requires a certified observer to distinguish between steam (caused by uncombined water) and opacity plumes and to take readings of opacity at points unimpacted by steam. Permit at 19, 29, 79. The Permit, therefore, relies on the expertise of trained, certified observers to determine whether uncombined water impacts opacity readings, and further monitoring of uncombined water is not necessary. *See In the Matter of GCC Dacotah Cement Manufacturing Plant*, Order on Petition No. VIII-2006-03 at 12 (June 15, 2007); *In the Matter of Pope and Talbot, Inc., Lumber Mill*, Order on Petition No. VIII-2006-04 at 12 (March 22, 2007).

G. Claim 7: Specificity and Enforceability of Wet Suppression and Partial Enclosure Requirements

This claim is found within sections II.B.2.b, II.B.2.c, II.B.3.a, II.B.3.b, and II.B.3.c in the Petition.

Petition Claim: The Petitioners claim that wet suppression and partial enclosure requirements in the Permit are unenforceable. *See* Petition at 30–36 and 53–61.

First, the Petitioners note that several conditions in the Permit require the use of wet suppression and/or partial enclosure on various units "to the extent practicable . . . to minimize particulate matter emissions and comply with the applicable emission limitations and standards." *Id.* at 31, 34, 53, 56–57 (quoting Conditions III.A.3.a, III.A.3.b, III.B.4.a, III.B.4.b, and III.B.4.c). The Petitioners argue that the phrase "to the extent practicable" is ambiguous, undefined, and understood to qualify an action as completely discretionary. *Id.* (citing *Cope v. Scott*, 45 F.3d 445 (D.C. Cir. 1995); *Oceana, Inc. v. Locke*, 670 F.3d 1238 (D.C. Cir. 2011)). Because the phrase is not included in the authorities cited in the Permit for the relevant conditions, the Petitioners allege that its inclusion in the Permit is contrary to applicable requirements and undermines the enforceability of the Arizona SIP. *Id.*

The Petitioners recognize that the Permit specifies (and ADEQ explains in its RTC), with regard to wet suppression, "to the extent practicable" does not include applying moisture such that material clogs machinery. *Id.* at 31, 34, 36, 53, 56, 58 (citing RTC at 20). However, the Petitioners claim that this explanation "does not provide any additional clarity" and that the phrase "still affords discretion for South32 to not utilize wet suppression at all." *Id.* at 34.

The Petitioners dismiss ADEQ's response that explains "to the extent practicable" is a common phrase used in various regulations, arguing that this response is irrelevant to the issue of how the phrase is used in the Permit. *Id.* at 33, 35, 55, 57–58 (citing RTC at 14). The Petitioners also assert that ADEQ's explanation that the phrase ensures the permittee will use the best air pollution controls possible makes little sense and seems the opposite of how the phrase functions in the Permit. *Id.* (citing RTC at 14).

Moreover, the Petitioners claim that it is not clear what "wet suppression" or "partial enclosure" means, noting that the Permit lists some options for wet suppression, including "water sprays, surfactant use, water jets, foggers, inherent moisture content (including moisture from upstream water sprays), or other equivalent control methods" but does not actually require that any specific option be utilized or achieve any level of control efficiency. *Id.* at 31–32, 34–35, 54–55, 57, 59. Similarly, the Petitioners argue that a lack of detail on the equipment and processes subject to these

requirements leaves the Permit unclear as to how wet suppression and/or partial enclosure applies to each specific unit, and that the RTC fails to clarify this point. *Id.* at 33–34, 36, 56–61.

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

The Petitioners claim the inclusion of the phrase "to the extent practicable" in the Permit renders emission control requirements to utilize wet suppression and partial enclosure "completely discretionary" and unenforceable. However, the Petitioners' interpretation of this phrase ignores its context in the Permit and ADEQ's explanation of its meaning in the RTC.

The phrase "to the extent practicable" does not confer complete discretion to the permittee as to whether or not to comply with the requirements of the Permit, as the Petitioners assert. The phrase does not excuse the permittee from the obligation to utilize wet suppression or partially enclose emission units to minimize emissions. As ADEQ explains, the phrase means that emission controls must be applied to the extent they are feasible (*i.e.*, "consistent with . . . mining plans and/or operating scenarios") *and no less than is necessary to comply with applicable limits*. RTC at 13–14. The amount of water applied or extent of enclosure may vary according to conditions, but the requirement to utilize these emission controls to comply with the associated limits is not discretionary and is clear in the Permit.

Furthermore, contrary to the Petitioners' claims, each time the phrase "to the extent practicable" appears in the Permit in the context of wet suppression requirements,[22] it is defined unambiguously: "For purposes of this condition, 'to the extent practicable' for purposes of wet suppression does not require addition of water to the extent that the controlled material adheres to conveyor belts or feeders or clogs transfer points."

In response to the Petitioners' comments on this issue, ADEQ also explains:

> Condition III.A.3 of Attachment "B" states that wet suppression should be applied "at all times". It also states that it "does not require addition of water to the extent that the controlled material adheres to conveyor belts or feeders or clogs transfer points." This means wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points. It should be noted that such language has been placed in several mining permits and has been successfully enforced by the Department.

RTC at 20.

The Petitioners fail to explain how this response is insufficient and are incorrect that the phrase allows the permittee to forgo using wet suppression, or partial enclosure, entirely.

---

[22] Conditions III.A.3.a, III.A.3.b, III.B.4.a, and III.B.4.b. Permit at 24, 27, 32, 33. These conditions are not provisions from the Arizona SIP, and the inclusion of the phrase "to the extent practicable," therefore, does not alter the enforceability of applicable requirements of the SIP in any way, as the Petitioners claim.

The Petitioners also fail to demonstrate that further specificity is needed in the Permit to ensure the enforceability of or assure compliance with any requirement related to wet suppression or partial enclosure. The Petitioners do not explain why the Permit must identify a specific means of wet suppression or partial enclosure for each individual emission unit. Different prevailing conditions at the facility may necessitate the use of different emission control methods, and the Permit affords some flexibility in this regard, as long as the permittee complies with the underlying limits. In response to the Petitioners' comments on the specific equipment and processes listed in the Permit, ADEQ references the Permit Application, which contains process diagrams that illustrate the equipment and processes in question. The Petitioners do not address this information in the permit record and do not otherwise explain why more detailed descriptions must be included in the Permit to assure compliance with any underlying applicable requirements. *See* 40 C.F.R. § 70.12(a)(2)(iii), (vi). The EPA, therefore, denies the Petitioners' request for an objection on this claim.

H. Claim 8: Monitoring of Wet Suppression and Partial Enclosure Requirements

This claim is found within sections II.B.2.i and II.b.3.n in the Petition.

Petition Claim: The Petitioners claim that the Permit fails to set forth monitoring in Conditions III.A.4 and III.B.5 to assure compliance with the wet suppression and/or partial enclosure requirements discussed in Claim 7 (*i.e.*, in section IV.G of this Order). Petition at 48–49, 50–51, 89, and 91. Specifically, the Petitioners allege that the Permit fails to require monitoring of the emission control activities such that "particulate matter emissions will be limited to comply with applicable limits" set forth in Conditions III.A.2 and III.B.2, including opacity limits. *Id.* at 48 and 89. The Petitioners argue that the Permit "does not require any quantitative monitoring of 'wet suppression' and/or 'partial enclosure' control efficiency that would assure compliance with assumed control efficiencies" in the Permit Application. *Id.* at 89 (citing Application at 41–42 and 48); *see id* at 49.

According to the Petitioners, the RTC seems to lack a direct response to the Petitioners' concerns about monitoring for wet suppression and/or partial enclosure and merely provides a general response asserting that the Permit "offers an appropriate methodology for addressing generic standards like opacity standards." *Id.* at 50–51, 91 (citing RTC at 15).

EPA Response: For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

All title V permits must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c); *see* 40 C.F.R. § 70.6(c)(1). Determining whether monitoring contained in a title V permit is sufficient to assure compliance with any term or condition is a context-specific, case-by-case inquiry.

The Permit contains limits on PM and opacity in Conditions III.A.2 and III.B.2 and requires the use of wet suppression and/or partial enclosure on various emission units to control emissions to comply with those limits. *See* Permit at 24 and 27. However, as the Petitioners point out, the Permit lacks any monitoring or recordkeeping related to these wet suppression and partial enclosure requirements. It is unclear whether this reflects an inadvertent omission, or a determination by ADEQ that such specific monitoring or recordkeeping was not necessary to assure compliance with the PM and opacity limits—

for example, because other permit terms provide a sufficient assurance of compliance with the PM and opacity limits and an indication that the Permit's wet suppression and/or partial enclosure requirements have been satisfied. ADEQ's permit record, including the RTC, provide no further clarity on this issue. The RTC describes how wet suppression should be employed and discusses sources of control factors used for these methods but does not address whether monitoring of their use is necessary. *See* RTC at 20–21.

The permit record is, therefore, inadequate for the EPA to determine whether the Permit sufficiently sets forth "monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.8(c)(3)(ii); *see* 40 C.F.R. § 70.6(c)(1).

Direction to ADEQ: ADEQ must revise the permit record to more fully explain how the Permit's collective set of requirements assure compliance with the PM and opacity limits and respond to the Petitioners' comments on the lack of monitoring for wet suppression and partial enclosure requirements. If ADEQ determines that such monitoring is necessary, it must revise the Permit to add monitoring and associated requirements such as recordkeeping and reporting. If there are other requirements in the Permit (*e.g.*, opacity monitoring, performance testing, etc.) that demonstrate that wet suppression and partial enclosure have been utilized as required by the Permit, ADEQ should explain the connected nature of these requirements.

I. Claim 9: Specificity and Enforceability of Requirements for Dust Collection Systems

This claim is found within sections II.B.2.d–h and j, II.B.3.d–m and o, and II.B.6.c in the Petition.

Petition Claim: The Petitioners challenge a total of 24 permit conditions[23] related to requirements for dust collection systems, arguing that the Permit makes these requirements discretionary and unenforceable. *See* Petition at 37–46, 51–52, 61–86, 91–92, and 117–119. The Petitioners also claim that a subset of the same permit conditions[24] are also unenforceable as a practical matter because they lack necessary operational details. *See id.* at 37–41, 44–46, 61–86, and 117–119.

First, the Petitioners note that several conditions in the Permit require the use of dust collection systems "to the extent practicable, to control the particulate matter emissions from the following processes . . .." *E.g., id.* at 37. The Petitioners argue that the phrase "to the extent practicable" is ambiguous, undefined, and understood to qualify an action as completely discretionary. *Id.* (citing *Cope v. Scott*, 45 F.3d 445 (D.C. Cir. 1995); *Oceana, Inc. v. Locke*, 670 F.3d 1238 (D.C. Cir. 2011). Because the phrase is not included in the authorities cited in the Permit for the relevant conditions, the Petitioners allege that its inclusion in the Permit is contrary to applicable requirements and undermines the enforceability of the Arizona SIP. *Id.*

The Petitioners dismiss ADEQ's response that explains "to the extent practicable" is a common phrase used in various regulations, arguing that this response is irrelevant to the issue of how the phrase is used in the Permit. *Id.* at *e.g.*, 38 (citing RTC at 14). The Petitioners also assert that ADEQ's explanation

---

[23] Specifically, the Petitioners cite Conditions III.A.3.c, III.A.3.d, III.A.3.e, III.A.3.g–m, III.A.5, III.B.4.d–m, III.B.6, VII.D.1, and VII.D.2.

[24] Specifically, the Petitioners cite Conditions III.A.3.c, III.A.3.d, III.A.3.h–m, III.B.4.d–m, VII.D.1, and VII.D.2.

that the phrase ensures the permittee will use the best air pollution controls possible makes little sense and seems the opposite of how the phrase functions in the Permit. *Id.* (citing RTC at 14).

Additionally, the Petitioners claim that Conditions III.A.5 and III.B.6, which set forth specific limits on PM_{10} emissions for certain dust collectors, are "meaningless and unenforceable" because the dust collectors are only required to control PM emissions "to the extent practicable." *Id.* at 51; *see id.* at 51–52, 91–92.

With regard to operational details, the Petitioners argue that the requirements to "install, maintain, and operate" the dust collection systems are unspecific and provide no detail to assess whether the dust collection systems are properly operating and controlling emissions. *E.g.*, *id.* at 37. Similarly, the Petitioners claim that the Permit lacks sufficient detail describing the processes and equipment from which the dust collection systems will control emissions. *Id.*

While acknowledging that the Permit requires the permittee to maintain manufacturer's specifications or an operating and maintenance plan for all equipment, the Petitioners claim this information is not available to the public and that without it, the requirements related to the dust collection systems are unenforceable. *Id.* Moreover, the Petitioners allege that the Permit lacks "operational limitations or requirements to ensure the dust collectors are operated and maintained effectively at all times and effectively control particulate matter emissions." *E.g.*, *id.* at 44 (citing 40 C.F.R. § 70.6(a)(1)).

The Petitioners claim that ADEQ's responses on these issues merely referenced operating and maintenance plans, indicating that inspectors will have access to them but not addressing the issue of whether the public will have access. *E.g.*, *id.* at 39 (citing RTC at 19).

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

The Petitioners claim the inclusion of the phrase "to the extent practicable" in the Permit renders emission control requirements to utilize dust collection systems "completely discretionary" and unenforceable. However, as explained in the EPA's response to Claim 7, the Petitioners' interpretation of this phrase ignores its context in the Permit and ADEQ's explanation of its meaning in the RTC.

The phrase "to the extent practicable" does not confer complete discretion to the permittee as to whether or not to comply with the requirements of the Permit, as the Petitioners assert. The phrase does not excuse the permittee from the obligation to use dust collection systems to minimize emissions. As ADEQ explains, the phrase means that emission controls must be applied to the extent they are feasible (*i.e.*, "consistent with . . . mining plans and/or operating scenarios") *and no less than is necessary to comply with applicable limits*. RTC at 13–14.

The requirements related to dust collectors are not provisions of the Arizona SIP or an NSPS, and the inclusion of the phrase "to the extent practicable," therefore, does not alter the enforceability of applicable requirements of the SIP or an NSPS in any way, as the Petitioners claim. The Petitioner does not identify any other applicable requirements with which the Permit does not assure compliance by virtue of the "to the extent practicable" language.

The Petitioners also fail to demonstrate that their concerns about the phrase "to the extent practicable" in other requirements have any effect on the specific PM_{10} limits applicable to the exhaust ports of the dust collectors. As previously explained, the phrase does not mean that the permittee can forgo operation of the dust collectors at its discretion. The EPA, therefore, denies the Petitioners' request for an objection on this claim.

The Petitioners also fail to demonstrate that additional detail related to the installation, operation, and maintenance of the dust collectors is necessary to assure compliance with the Permit's terms. The Petitioners do not connect these requirements regarding dust collectors to any underlying emission limits or applicable requirements to show how further detail is necessary to assure compliance with those limits. *See* 40 C.F.R. § 70.12(a)(2)(ii). The Petitioners also neglect to consider overlapping monitoring requirements in the Permit, including opacity monitoring and/or performance testing that is also applicable to these units and processes, and how these monitoring requirements might or might not indicate the proper operation of the dust collectors.

Additionally, in response to the Petitioners' comments on these issues, ADEQ references the Permit Application, which contains process diagrams listing the various drops and other processes controlled by the dust collectors. The Petitioners do not address this information in the permit record and do not otherwise explain why more detailed descriptions of these processes must be included in the Permit to assure compliance with any underlying applicable requirements. *See* 40 C.F.R. § 70.12(a)(2)(iii), (vi). The EPA, therefore, denies the Petitioners' request for an objection on this claim.

J. Claim 10: Sufficiency of Periodic Opacity Monitoring

This claim is found within sections II.B.2.i, II.B.3.n, and II.B.6. in the Petition.

Petition Claim: The Petitioners claim that the Permit lacks sufficient periodic monitoring to assure compliance with opacity limits, challenging Conditions III.A.4.b, III.B.5.f, and VII.E.2 (all of which refer to procedures contained in Condition II.B) because they allow the permittee to "completely forego quantitative monitoring" in lieu of subjective observations and because that the Permit relies on "on call" observers to conduct required "immediate" observations. Petition at 47; *see id.* at 47–50, 87, and 119–120. The Petitioners also claim that weekly observations are insufficiently frequent to assure compliance with the opacity limits. *See id.*

Subjective Observations

The Petitioners claim that Condition II.B.3.c only requires quantitative opacity monitoring via EPA Method 9 if an initial, instantaneous survey yields the "appearance" of opacity that is greater than the applicable standard. *Id.* The Petitioners argue that these instantaneous surveys are inherently subjective and make the opacity limits unenforceable. *Id.* The Petitioners also claim that it is unclear who or what conducts these initial observations and how they gauge the appearance of opacity exceedance. *Id.*

The Petitioners acknowledge ADEQ's response that reiterates the opacity monitoring requirements in the Permit but argue that it does not address their concerns over the subjectivity and unenforceability of the instantaneous surveys. *E.g.*, *id.* at 49–50 (citing RTC at 14).

Observer Availability

Additionally, the Petitioners note that the Permit requires EPA Method 9 observations to be conducted immediately following the appearance of an exceedance during an instantaneous survey by an "EPA Reference Method 9 certified observer." *Id.* However, the Petitioners allege that the Permit does not require a certified observer to be on site, only "on call." *Id.* The Petitioners explain that certified observers are likely to not be on site, and therefore it is likely impossible to conduct the "immediate" observations required by Condition II.B.3.c. *Id.* The Petitioners claim that the RTC does not address their concerns about the availability of observers. *Id.* at 50, 90, 121.

Monitoring Frequency

Arguing that emissions are likely to be variable, the Petitioners note that the emission units subject to the opacity limits process raw materials in a heavy industrial setting. *Id.* at 47–48, 87–88, 120. The Petitioners claim the variability in the rate of materials processed and the composition of materials processed will produce variability in emissions. *Id.* The Petitioners also argue that more frequent monitoring is especially needed because the units and processes subject to the opacity standards "rely entirely on the effective and continuous utilization of various emission controls, [including] 'wet suppression' and 'dust collectors,' to assure compliance." *Id.* at 47; *see id.* at 48 (citing *In the Matter of CITGO Refining and Chemicals Company, L.P.*, Order on Petition No. VI-2007-01 at 7–8 (May 28, 2009)). Moreover, the Petitioners emphasize the need for more frequent monitoring because the facility assumes "high control efficiencies for a number of emissions sources." *Id.*

The Petitioners claim that ADEQ in its RTC justifies the frequency of opacity monitoring by vague, unsupported references to other mining permits but provides no examples. *Id.* at 50 (citing RTC at 22). The Petitioners dismiss ADEQ's assertions about other requirements ("including testing, and other general obligations") because they are unrelated to monitoring, or not relevant in this case. *Id.*

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

All title V permits must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c); *see* 40 C.F.R. § 70.6(c)(1). Determining whether monitoring contained in a title V permit is sufficient to assure compliance with any term or condition is a context-specific, case-by-case inquiry. To aid permitting authorities and the public in this fact-specific exercise, the EPA has identified a non-exhaustive list of relevant factors:

> (1) [T]he 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).

Here, the Permit sets forth the following opacity monitoring requirements to assure compliance with several different opacity limits applicable to dozens of emission units. Permit at 19–20. Condition II.B requires (at frequencies specified in other sections of the Permit) instantaneous surveys of visible emissions from both process stack sources and fugitive dust sources (Condition II.B.3.a) and records of the results of the surveys (Condition II.B.3.b). Additionally, if, during the surveys, emissions appear greater than the applicable opacity standard, the Permit requires immediate six-minute observations according to EPA Method 9 (Condition II.B.3.c), followed by repair, recordkeeping, and reporting requirements in the event of a reading greater than the standard. All observations, including the instantaneous surveys, must be conducted by an observer certified in EPA Method 9 (Condition II.B.1.a).

Subjective Observations

The Permit essentially establishes a screening strategy that reduces the number of formal Method 9 readings required. Screening strategies for opacity monitoring may be reasonable in certain circumstances, for example where Method 9 readings are impractical because of a large number of emission points. *See* EPA, *Region 7 Policy on Periodic Monitoring for Opacity* (Apr. 18, 1997). A screening strategy in such a situation allows observers to focus their time on high-emitting sources that are more likely to exceed limits.

The Petitioners have not demonstrated that the particular screening strategy employed for opacity monitoring in the Permit is insufficient to assure compliance. The Petitioners' challenge to the screening strategy is a general one: the Petitioners argue that the instantaneous surveys are too subjective to be enforceable. But the same argument could be said for all screening strategies, and to some degree for Method 9 observations themselves, which inherently involve some level of subjectivity. Thus, the Petitioners' general argument is unpersuasive. The Petitioners also argue that it is unclear who conducts these observations and how they gauge the appearance of opacity. The Petitioners fail to recognize that the Permit requires the surveys to be conducted by observers certified in EPA Method 9, a key aspect of this issue. Certified observers are trained and qualified to make opacity judgements and minimize subjectivity by controlling various factors relevant to the observation (*e.g.*, distance, light, viewing angle, etc.). The Petitioners have, therefore, failed to demonstrate that the opacity screening strategy is unenforceable or insufficient to assure compliance with the Permit's opacity limits, and the EPA denies the Petitioners' request for an objection on this claim.

Observer Availability

The Petitioners seem to misunderstand the requirements concerning certified observers in the Permit. As laid out in Condition II.B.3, the Permit requires "immediate" Method 9 observations following an instantaneous survey resulting in the appearance of an opacity exceedance. Permit at 19. The Petitioners argue that the Permit's requirement to have a Method 9 observer present *or on call* means that this "immediate" requirement cannot be complied with. However, the Permit also states—in Condition II.B.1.a—that all instantaneous surveys must be conducted by a Method 9 certified observer. Thus, as contemplated by the Permit, there would not be a situation in which an immediate Method 9 observation would be required without a certified observer present.

Monitoring Frequency

Because the sufficiency of monitoring is a context-specific issue, in order to demonstrate a basis for the EPA's objection due to inadequate monitoring, petitioners must provide some fact-specific analysis of the permit terms in question. *See* 40 C.F.R. § 70.12(a)(2)(iii) (requiring petitioners provide "[a]n explanation of how the term or condition in the permit . . . is not adequate . . . .").

Here, the Petitioners claim that weekly opacity monitoring is insufficiently frequent to assure compliance with the Permit's limits, presenting two main arguments based on the variability of emissions and the use of add-on controls (appealing to factors listed in the *CITGO Order*).

The Petitioners claim that the frequency of opacity monitoring should be greater because the units use various emission controls, including wet suppression and dust collectors, to assure compliance with the Permit's limits. The Petitioners do not explain, and it is not clear to the EPA, why the reliance on these control mechanisms should entail more frequent monitoring.[25]

To support their claim about the variability of emissions, the Petitioners argue generally that the units subject to the opacity limits handle raw material in a heavy industrial setting with likely variable process rates and material composition. However, the Petitioners do not provide any details relevant to any specific emission unit (*e.g.*, data or compelling arguments showing that emissions may vary significantly at intervals shorter than a week) to substantiate these speculative assertions, and thereby fail to demonstrate that the Permit's current monitoring frequency is insufficient to assure compliance. The EPA, therefore, denies the Petitioners' request for an objection on this claim.

K. Claim 11: Applicability of Requirements for Wet Scrubbing Emission Control Devices

This claim is found within sections II.B.3.n and II.B.3.p in the Petition.

Petition Claim: The Petitioners challenge the applicability and enforceability of requirements for wet scrubbing emission control devices. *See* Petition at 86–90, 94.

The Petitioners note that Condition III.B.5.a requires the operation of a monitoring device for the continuous measurement of pressure change for any "affected facility using a wet scrubbing emission control device." *Id.* at 86. However, the Petitioners claim that it is not clear which units use a wet scrubbing emission control device and are, therefore, subject to Condition III.B.5.a and related requirements. *Id.* The Petitioners repeat the same concerns with regard to Conditions III.B.5.c, III.B.5.d, and III.B.7.a(8), which similarly apply to emission units using a wet scrubbing emission control device. *Id.* at 87, 94.

The Petitioners note that the Permit lacks any condition that specifically requires the use of a wet scrubbing emission control device and claim that ADEQ's response in its RTC failed to clarify which units (if any) at the facility use one. *Id.* at 89–90 (citing RTC at 22). Arguing that this ambiguity

[25] The use of add-on controls could be relevant to *what indicator* to monitor and possibly the appropriate frequency of monitoring, but its inclusion on the list of factors in the *CITGO Order* was not intended to imply that the use of add-on controls always necessitates more frequent monitoring, as the Petitioners suggest.

undermines the enforceability of the Permit, the Petitioners contend that the Permit cannot include requirements that are not applicable to the facility. *Id.* at 86–87.

EPA Response: For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

CAA section 504(a) requires title V permits to "include enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements." 42 U.S.C. § 7661c(a); *see* 40 C.F.R. § 70.6(a)(1). 40 C.F.R. § 70.2 defines applicable requirements "as they apply to emissions units in a part 70 source." One of the primary purposes 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. at 32251. Thus, a title V permit compiles, in a single document, all of the air quality control requirements as they apply to the source's emission units such that applicability and compliance obligations are clear.

Here, the Permit contains an opacity limit from the NSPS at 40 C.F.R part 60 subpart LL in Condition III.B.2.b. Permit at 31. The opacity limit exempts emissions from any "affected facility using a wet scrubbing emission control device." Conditions III.B.5a–d contain monitoring requirements related to wet scrubbing emission control devices. Permit at 36–37. In essence, the Permit sets forth alternative compliance options for emission units subject to subpart LL: either the opacity limit or the wet scrubbing emission control device requirements apply, based on whether each unit uses such a device.

The equipment list in Attachment "C" of the Permit indicates whether each unit is subject to subpart LL, but not which of the two compliance options applies. *See* Permit at 91–104. The permit record provides no further detail. As the Petitioners note, ADEQ's response in its RTC does not clarify which units (if any) are subject to the wet scrubbing emission control device requirements but merely refers to (unavailable) "O&M and manufacturer specification obligations." RTC at 22.

The permit record does not provide enough information to determine the compliance obligations for each emission unit and is, therefore, inadequate for the EPA to determine whether the Permit assures compliance with all applicable requirements. 40 C.F.R. § 70.8(c)(3)(ii); *see* 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.2 (definition of "applicable requirement"), 70.6(c)(1).

Direction to ADEQ: ADEQ must revise the permit record, and, if necessary, the Permit, to clearly indicate the compliance option that is required to demonstrate compliance with subpart LL for each emission unit subject to the NSPS.

L. Claim 12: Specificity and Frequency of PM and Opacity Testing Requirements

This claim is found within section II.B.3.p in the Petition.

Petition Claim: The Petitioners claim that Condition III.B.7 fails to set forth sufficient monitoring and testing to assure compliance with applicable PM and opacity limits in Condition III.B.2. Petition at 93; *see id.* at 93–95.

The Petitioners argue that the Permit is unclear regarding which units are subject to performance tests required by Condition III.B.7.a(a) and opacity observations required by Conditions III.B.7.a(3) and (4). *Id.* at 93–94. The Petitioners list several examples of units listed in Attachment "C" of the Permit subject to 40 C.F.R. § 60 subpart LL that they claim are not mentioned elsewhere in the Permit, arguing that Attachment "C" "does not provide sufficient detail to understand specifically how applicable particulate monitoring applies." *Id.* at 93.

Additionally, the Petitioners challenge the frequency of annual performance tests required by Conditions III.B.7.a(7) and III.B.7.b, on the grounds that variability in the operations and material processed at the facility necessitate more frequent testing to assure ongoing compliance with the Permit's limits. *Id.* at 94. The Petitioners claim that the TSD fails to provide a basis for the selected testing frequency and the RTC provides little more insight, merely indicating that annual testing is common in the mining industry. *Id.* at 94–95.

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

With regard to issues concerning the applicability of requirements in Condition III.B.7, as Condition III.B.1 indicates, and as ADEQ reiterates in its RTC, the equipment list in Attachment "C" of the Permit clearly identifies which emission units are subject to subpart LL and, therefore, the emission limits under Condition III.B.2 and the performance testing requirements under Condition III.B.7. Permit at 31, 91–104; *see* RTC at 30. The Petitioners do not explain in any further detail how the Permit is ambiguous about the applicability of the performance testing requirements. Condition III.B.7 also includes extensive instructions on how the performance tests must be conducted with references to federal regulations and EPA test methods. The Petitioners fail to analyze these requirements in relation to any specific emission unit to demonstrate that they are unclear in any way. *See* 40 C.F.R. § 70.12(a)(2)(iii).

With regard to testing frequency, the Petitioners claim that annual testing is not sufficiently frequent, making a general and speculative argument about the variability of emissions in the industrial setting of the mine, but fail to provide any detail or support to their claims with regard to any specific emission units. *See id.* The Petitioners, thereby, fail to demonstrate that the Permit's current testing requirements are insufficient to assure compliance with the applicable PM and opacity limits, and the EPA denies the Petitioners' request for an objection on this claim.

M. Claim 13: Cyanide Emission Limits

This claim is found within section II.B.6.b in the Petition.

Petition Claim: The Petitioners claim that limits on cyanide emissions in Conditions VII.C.6 and VII.C.7 are not enforceable as a practical matter "due to vague and ambiguous wording and a lack of specificity." Petition at 116.

The Petitioners first summarize the limits, alleging that they authorize the discharge of hydrogen cyanide and sodium cyanide dust at rates up to "0.3 parts per million by volume for any averaging period of eight hours" and "140 micrograms per cubic meter for any averaging period of eight hours" respectively. *Id.* The Petitioners assert that "it is not clear what emission units subject to Condition VII

actually emit [hydrogen cyanide and sodium cyanide dust] and from where, making it impossible to understand how this Condition applies and can be enforced." *Id.* Additionally, the Petitioners claim that the Permit requires no monitoring or testing for any unit subject to the limits. *Id.*

The Petitioners then quote ADEQ's response: "The facility will not be storing sodium cyanide in solid form and additionally, there is no significant potential for hydrogen cyanide emissions. Consequently, no monitoring or testing requirements are stipulated." *Id.* (quoting RTC at 28).

With regards to hydrogen cyanide, the Petitioners argue that ADEQ did not provide any information or analysis for why it believes "there is no significant potential" for emissions. *Id.* at 117. The Petitioners claim that while the emissions may be low, periodic monitoring is needed in the Permit because there are emission limits in the Permit. *Id.* With regards to sodium cyanide, the Petitioners seem to agree with ADEQ that the facility will not store sodium cyanide in solid form on site, citing the Permit Application. *Id.* However, the Petitioners argue that "nothing in the company's application or the Title V Permit expressly states" that the facility will not store sodium cyanide in solid form. *Id.* at 116. Additionally, the Petitioners note that the Permit Application states that "solid cyanide pellets will be transported via truck to the Hermosa Mine." *Id.* The Petitioners claim that because the Permit "authorizes the handling of solid waste" then the Permit must set forth sufficient monitoring to assure compliance. *Id.*

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

The Petitioners challenge the enforceability of Conditions VII.C.6 and VII.C.7 on the grounds that the Permit fails to identify which units are subject to the limits. However, the conditions both limit emissions "from any location" such that "the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located" fall below certain levels. Permit at 79. As such, they are effectively facility-wide limits, and the Petitioners' arguments about identifying specific units are misguided.

In response to the Petitioners' comments requesting additional monitoring to assure compliance with these limits, ADEQ argued that additional monitoring is unnecessary since the facility does not have the potential to emit hydrogen cyanide or solid cyanide dust. RTC at 28. The Petitioners fail to demonstrate that this response is incorrect or insufficient. The Petitioners provide no support or analysis for why they would expect hydrogen cyanide emissions. *See* 40 C.F.R. § 70.12(a)(2)(iii). With regard to solid cyanide dust emissions, while the Petitioners note that the Permit Application indicates that solid cyanide pellets will be transported to the facility via truck, they neglect to consider that the Permit Application also explains:

> [W]ater will be added to the truck. The solution will be premixed, and then the pre-mixed solution will be offloaded into the storage tanks on-site prior to use in the process. Because solid cyanide pellets are converted to solution form before being handled at the Hermosa Project, there should be no sodium cyanide dust or dust from any other solid cyanide subject to this regulation.

Permit Application at 9–11.

The Petitioners, therefore, fail to demonstrate that the Permit does not assure compliance with the limits on cyanide emissions contained in Conditions VII.C.6 and VII.C.7, and the EPA denies the Petitioners' request for an objection on this claim.

N. Claim 14: Definition of "Tier IV" in Requirements for Diesel Engines

This claim is found within section II.B.4.a in the Petition.

Petition Claim: The Petitioners claim that a requirement to use only Tier 4 diesel internal combustion engines in Condition IV.A.2.a is unenforceable as a practical matter because the Permit fails to specify what "Tier 4" means. *See* Petition at 95–97.

The Petitioners claim the authority cited in the Permit for Condition IV.A.2.a (A.A.C. R18-2-306.01(A)) does not contain a definition for "Tier 4 diesel internal combustion engines" and it is not otherwise clear what the phrase means. *Id.* at 96. The Petitioners note that other portions of Condition IV.A refer to provisions of 40 C.F.R. § 1039, which the Petitioners acknowledge does define "Tier 4" as "relating to the Tier 4 emission standards, as shown in § 1039.101 and § 1039.102." *Id.* The Petitioners conjecture that Condition IV.A.2.a "may mean that South32 shall only use engines that are certified as compliant with the standards set forth at 40 C.F.R. §§ 1039.101 and 1039.102." *Id.* However, the Petitioners allege it is not clear whether this is the intent of the condition. *Id.* Even if this were the intent, the Petitioners argue that the specific requirement imposed by using Tier 4 engines would still be unclear because 40 C.F.R. § 1039.101 and 1039.102 contain various potentially relevant standards. *Id.* The Petitioners claim that ADEQ failed to respond directly to their comments on this issue. *Id.*

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

The Petitioners have failed to demonstrate that the Permit is ambiguous about the meaning of "Tier 4." Tier 4 refers to the EPA's latest, strictest emission standards for nonroad compression-ignition diesel engines. As the Petitioners suggest, and as is clear in the Permit, Tier 4 engines are certified as compliant with emission standards under 40 C.F.R. part 1039. Subpart IIII (at 40 C.F.R. § 60.4201(a)) also requires compliance with these standards in part 1039. The engines subject to subpart IIII (and therefore the Tier 4 emission standards in part 1039) are clearly indicated in the Permit in Attachment "C." *See* Permit at 98. To the extent the Petitioners argue that the Permit does not clearly indicate *which standards* in part 1039 are applicable to which engines, the EPA addresses this issue in Claim 16.

O. Claim 15: Recordkeeping to Assure Compliance With Fuel Restrictions on Diesel Engines

This claim is found within section II.B.4.b in the Petition.

Petition Claim: The Petitioners claim that the Permit fails to set forth monitoring to assure compliance with diesel fuel limits in Condition IV.A.3. Petition at 97–98.

The Petitioners recount how, as a result of Petitioners' comments on this issue, ADEQ added Condition IV.A.8.c to the Permit, requiring recordkeeping to demonstrate compliance with the fuel restrictions in Condition IV.A.3. *Id.* at 97 (citing RTC at 23). However, the Petitioners argue that the recordkeeping provision is not specific enough to assure compliance with specific limits on the fuel, stating:

> The Condition does not require South32 to keep any specific type of record from the fuel vendor or to acquire any records with any frequency, does not require that any vendor records include information regarding sulfur content, cetane index, or aromatic content, does not require South32 to monitor any records to verify compliance, and provides no other details that . . . will assure compliance.

Id.

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

The Petitioners fail to demonstrate that further specificity is necessary to assure compliance with the diesel fuel standards in Condition IV.A.3. As the Petitioners note, Condition IV.A.8.c requires the permittee to obtain and maintain records from fuel vendors to demonstrate compliance with the diesel fuel requirements. These diesel fuel requirements are specified in Condition IV.A.3, which is referenced in the recordkeeping requirement. The Petitioners assert that the recordkeeping requirement must repeat the specific fuel restrictions (on sulfur content, cetane index, and aromatic content) but present no arguments as to why referencing Condition IV.A.3 is insufficient for this purpose, or why the recordkeeping requirement must contain any other information. *See* 40 C.F.R. 70.12(a)(2)(iii).

P. Claim 16: Incorporation by Reference of Requirements for Diesel Engines

This claim is found within section II.B.4 in the Petition.

Petition Claim: The Petitioners claim that emission limits and other requirements applicable to the facility's diesel engines are unenforceable as a practical matter because the Permit fails to clearly incorporate and specify the requirements applicable to each engine. *See* Petition at 98–106.

The Petitioners take issue with several Conditions (IV.A.4.a, IV.A.4.b, IV.A.5.c(3), and IV.A.7) that incorporate requirements by reference to federal regulations, on the grounds that the incorporation is too broad to identify specific requirements applicable to specific engines. *See id.* The Petitioners state:

> While it may be appropriate for ADEQ to incorporate by reference applicable regulations, the agency cannot simply present a grab bag of regulatory citations and expect the public, or its own inspectors for that matter, to understand what requirements actually apply to the Hermosa Mine. As EPA has noted, the use of incorporation by reference must be balanced "with the need to issue comprehensive, unambiguous permits useful to all affected parties, including those engaged in field inspections." Further, regulatory citations "must be detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation."

Id. at 98–99 (quoting *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program* at 38, 37 (March 5, 1996) (*White Paper 2*)).

Specifically, the Petitioners first claim that the Permit fails to identify which engines are subject to emission limits under Condition IV.A.4.a and which are subject to limits under Condition IV.A.4.b. *Id.* at 98–99. The Petitioners note that the applicability of the two conditions depends on the engine power and displacement per cylinder of each engine, but the Permit does not contain the critical cylinder displacement information needed to make the distinction. *Id.* at 98.

Moreover, the Petitioners claim that, aside from the issues with applicability, Conditions IV.A.4.a and IV.A.4.b do not clearly incorporate emission limits. *Id.* at 98–99. With regard to Condition IV.A.4.a, the Petitioners explain:

> The Condition only cites broad regulatory provisions, stating that South32 must comply with "the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 1039.102, 1039.104, 1039.105, 1039.107, and 1039.115 and 40 CFR part 1039, appendix I, as applicable, for all pollutants, for the same model year and maximum engine power." The various federal regulations cited in Condition IV.A.4.a set forth many different emissions, operations, and other requirements related to the manufacturing and operation of engines. Further, these regulations provide a number of options for meeting the various emission limitations and standards. For example, while 40 C.F.R. § 1039.101(b) sets forth emission standards for engines manufactured after 2014, 40 C.F.R. § 1039.101(d) also sets forth an "averaging, banking, and trading" program based on "family emission limits" that differ from the limits at 40 C.F.R. § 1039.101(b). Additionally, 40 C.F.R. § 1039.104 sets forth an entirely different set of emission limits and requirements, including various interim provisions and delayed compliance options. 40 C.F.R. § 1039, appendix I sets forth a "Summary of Previous Emission Standards," which do not appear to be relevant.

Id. at 98. The Petitioners provide similar arguments to show how Condition IV.A.4.b also incorporates complicated regulatory provisions, referencing testing requirements in Condition IV.A.7, some of which seem obviously inapplicable to the facility's engines. *See id.* at 99, 105–106. Since other Conditions in the Permit refer to and depend on the limits in Conditions IV.A.4.a and IV.A.4.b (*i.e.*, Conditions IV.A.5.a, IV.A.6.a, and IV.A.6.b), the Petitioners argue that the ambiguity surrounding the emission limits renders these Conditions unenforceable as well. *Id.* at 102, 104.

Additionally, the Petitioners challenge the incorporation of 40 C.F.R. § 1068 in Condition IV.A.5.c(3), stating: "40 C.F.R. § 1068 broadly sets forth applicability and miscellaneous provisions that apply to a variety of engine and equipment categories. For the Title V Permit to simply state that South32 must comply with 40 C.F.R. § 1068, as applicable, provides no clarity as to what requirements actually apply to the engines." *Id.* at 102.

The Petitioners dismiss ADEQ's response in its RTC, claiming ADEQ is simply wrong in its assertion that the "high-level" referencing of regulatory requirements in the Permit is effective and clear. *Id.* at 100 (citing RTC at 23).

EPA Response: For the following reasons, the EPA grants this Petition claim and objects to the issuance of the Permit.

CAA section 504(a) requires all title V permits to "include enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements." 42 U.S.C. § 7661c(a); *see* 40 C.F.R. § 70.6(a)(1). 40 C.F.R. § 70.2 defines applicable requirements "as they apply to emissions units in a part 70 source." One of the primary purposes 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. at 32251. Thus, a title V permit compiles, in a single document, all of the air quality control requirements as they apply to the source's emission units such that applicability and compliance obligations are clear.

This requirement can be satisfied using incorporation by reference in certain circumstances, as long as references in the permit are "detailed enough that the manner in which the referenced material applies to the facility is clear and is not reasonably subject to misinterpretation." *White Paper 2* at 37. Moreover, "Where only a portion of the referenced document applies, . . . permits must specify the relevant section of the document." *Id.* The EPA has previously addressed the suitability of high-level citations to federal regulations (such as an NSPS), stating: "The permit needs to cite to whatever level is necessary to identify the applicable requirements that apply to each emissions unit or group of emission units (if generic grouping is used), and to identify how those units will comply with the requirements." Letter from John S. Seitz, EPA, to Robert Hodanbosi and Charles Lagges, STAPPA/ALAPCO, Enclosure B at 6 (May 20, 1999). The EPA has objected to title V permits that have attempted to incorporate by reference NSPS (or NESHAP) requirements without providing sufficient detail to determine the specific requirements that apply to emission units at the source. *See e.g., In the Matter of Tesoro Refining and Marketing Co.*, Order on Petition No. IX-2004-6 at 8–9 (Mar. 15, 2005) (*Tesoro Order*); *In the Matter of ETC Texas Pipeline, Ltd. Waha Gas Plant*, Order on Petition No. VI-2020-3 at 17–19 (Jan. 28, 2022) (*Waha Order*); *In the Matter of Delaware City Refining Company, LLC, Delaware City Refinery*, Order on Petition No. III-2022-10 at 29–30 (July 5, 2023) (*Delaware City Order*). Specifically, in the *Tesoro Order*, the EPA found that references to sections of a NESHAP that were irrelevant to the source created ambiguity and applicability questions that "render the Permit unenforceable as a practical matter and incapable of meeting the Part 70 standard that it assure compliance with all applicable requirements." *Tesoro Order* at 8.

The *Tesoro, Waha,* and *Delaware City Orders* all involved relatively complex federal regulations containing many different requirements, only some of which were applicable to individual emission units at the respective sources. Such is also the case here. The Petitioners have demonstrated that the Permit fails to clearly identify the emission limits and other requirements of the subpart IIII NSPS applicable to the diesel engines at the facility. As the Petitioners note, and as ADEQ acknowledges in the RTC, the Permit merely copies individual provisions of the NSPS, which reference numerous potentially applicable requirements, without specifying how those requirements are applicable to individual engines. Thus, the Permit cannot be said to include or assure compliance with the applicable requirements of the subpart IIII NSPS. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1).

The EPA appreciates the complexity of certain federal regulations and is willing to assist permitting

authorities seeking to understand how these regulations apply to individual facilities. However, it is ultimately the permitting authority's responsibility to issue title V permits that include (that is, identify with sufficient detail and clarity) all applicable requirements. Because the Permit does not satisfy these requirements, the EPA objects. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1).

Direction to ADEQ: ADEQ must revise the Permit (specifically Conditions IV.A.4.a, IV.A.4.b, IV.A.5.c(3), and IV.A.7) to ensure that it includes the applicable requirements of the subpart IIII NSPS. If ADEQ wishes to accomplish this through incorporation by reference, it must ensure that the Permit is unambiguous as to which requirements (including the emission limitations and standards, as well as the applicable testing, monitoring, recordkeeping, and reporting requirements) apply to which engines at the facility.

Q. Claim 17: Specificity of Maintenance and Operation Requirements Applicable to Diesel Engines

This claim is found within sections II.B.4.e and II.B.4.f in the Petition.

Petition Claim: The Petitioners claim that various operation and maintenance requirements applicable to the facility's diesel engines are not enforceable as a practical matter because certain terms are undefined and unclear. *See* Petition at 101–105.

First, the Petitioners argue that the phrase "life of the engine" is unclear and undefined in Condition IV.A.5.a, which requires that the engines be operated and maintained to "achieve the emission standards as required in this Section over the entire life of the engine." *Id.* at 102. Although the Petitioners note that the phrase is contained in the applicable requirements at 40 C.F.R. § 60.4206, they insist the Permit must specifically explain what "life of the engine" means to ensure the enforceability of Condition IV.A.5.a. *Id.*

The Petitioners also criticize the Permit for its lack of definition for the phrases "manufacturer's emission-related written instructions" and "emission-related settings" in Condition IV.A.5.c. *Id.* Since the Permit requires operation and maintenance according to those instructions and settings, the Petitioners argue they must be specified in the Permit. *Id.* Similarly, the Petitioners claim that the phrases "maintenance plan" and "good air pollution control practices for minimizing emissions" in Condition IV.A.6.b are ambiguous and undefined, stating: "The Title V Permit sets forth no specific requirements as to what a 'maintenance plan' should include . . . ." *Id.* at 104.

Addressing ADEQ's responses to their comments on these issues, the Petitioners claim that although ADEQ responded generally about operation and maintenance plans, indicating they must be kept on-site at the facility and available to inspectors, this response did not address the Petitioners' concerns about the clarity of the specific phrases used in the Permit. *Id.* at 103 (citing RTC at 19) and 105 (citing RTC at 14).

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

The Petitioners fail to demonstrate that further specificity is required in the Permit in order to ensure the enforceability of or assure compliance with the Permit's terms.

As the Petitioners note, the phrase "life of the engine" is contained in the applicable requirement from subpart IIII at 40 C.F.R. § 60.4206. Subpart IIII also defines periods for engine lifetimes depending on cylinder displacement. *See* 40 C.F.R. § 60.4219; 40 C.F.R. § 1039.101(g), (e). The Petitioners fail to acknowledge these definitions or present any arguments for why they must also be included in the Permit. *See* 40 C.F.R. § 70.12(a)(2)(iii).

Similarly, the Petitioners fail to present any analysis related to any applicable requirements to demonstrate that the Permit must define other terms or include plans or other instructions mentioned in the Permit related to operating and maintaining the diesel engines. The EPA has addressed the inclusion of plans in title V permits in multiple previous orders. *See, e.g., In the Matter of Kentucky Syngas, LLC,* Order on Petition No. IV-2010-9 at 11–14 (June 22, 2012); *In the Matter of Drummond Co., Inc., ABC Coke Plant*, Order on Petition No. IV-2019-7 at 13–15 (June 30, 2021); *In the Matter of Plains Marketing et al.*, Order on Petition Nos. IV-2023-1 & IV-2023-3 at 51–52 (Sept. 18, 2023). To summarize the EPA's position, only plans (or portions of plans) that are necessary to impose an applicable requirement or assure compliance with an applicable requirement need be included in a title V permit. *See* CAA § 504(a), (c); 40 C.F.R. §§ 70.5(c), 70.6(a)(1), 70.6(c)(1). The underlying question—whether the provisions of a plan must be included in a facility's title V permit—is a fact-specific inquiry, and the petitioner has the burden to demonstrate why a specific plan must be included in a permit.

Here, the Petitioners make no arguments relating the instructions, settings, and plans mentioned in Conditions IV.A.5.c and IV.A.6.b to any other permit terms or applicable requirements and thus fail to demonstrate that the Permit must include them. *See* 40 C.F.R. § 70.12(a)(2)(iii). The EPA, therefore, denies the Petitioners' request for an objection on this claim.

R. Claim 18: Enforceability of Tons/Year Emission Limits Applicable to Engines

This claim is found within sections II.B.4.d and II.B.5.a in the Petition.

Petition Claim: The Petitioners claim that emission limits applicable to the facility's engines are unenforceable as a practical matter and fail to limit the facility's potential to emit (PTE) because the Permit requires compliance determination on a single 12-month block period and one of the limits fails to include all emissions from the engines. *See* Petition at 100–101, 108–109.

First, the Petitioners argue that Conditions IV.A.4.c and IV.B.3.b, which contain tons/year emission limits for various pollutants applicable to diesel and natural gas-fired engines at the facility, "do not appear to set forth legitimate federally enforceable limits on the Hermosa Mine's potential to emit such that they assure emissions will not exceed major source thresholds under the PSD provisions of the Arizona SIP." *Id.* at 100, 108. Referencing annual testing requirements, the Petitioners allege that the Permit only requires the permittee to assess compliance with the limits once per year, "based on single 12-month block periods, rather than calculate emissions on a rolling basis." *Id.* The Petitioners illustrate that such an approach only yields data on annual emissions for the specific 12-month block period that is calculated, but not all other 12-month block periods, and state: "For the annual limits to

practically limit the Hermosa Mine's potential to emit, the Title V Permit must assure compliance on a rolling basis and ensure that emissions are limited during every yearly period the mine is operating." *Id.*

Additionally, with respect to Condition IV.B.3.b, the Petitioners claim that the limit on VOC emissions improperly excludes formaldehyde and that this exclusion "appears contrary to applicable requirements." *Id.* at 108. Citing the definition of VOC in the Arizona SIP (at R18-2-101(154)), the Petitioners explain that formaldehyde is a VOC, and, therefore, counts towards the Hermosa Mine's potential to emit for VOCs and must be included when calculating compliance with the applicable limit. *Id.* at 108–109. The Petitioners acknowledge that the NSPS at 40 C.F.R. § 60, subpart JJJJ (which is also applicable to the natural gas-fired engines) excludes formaldehyde from applicable VOC limits, however, they dispute the relevancy of this fact because the "NSPS limits are not meant to establish federally enforceable limits on the Hermosa Mine's potential to emit." *Id.* at 109 n.20.

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

Emission Calculation Period

The Petitioners argue that the annual limits in Conditions IV.A.4.c and IV.B.3.b are unenforceable as a practical matter because the compliance determination methods only require emission calculation once per year, rather than on a rolling basis. Petition at 101, 108. However, the Petitioners are simply incorrect in this assertion and seem to have misinterpreted the Permit. Conditions IV.A.6.c and IV.B.4.e require the calculation of emissions each month ("within two weeks of the end of the calendar month") to compare with the ton/year limits, directly refuting the Petitioners' reasoning. Permit at 44, 49.

Formaldehyde

As an initial matter, although the Petitioners frame their claims against Conditions IV.A.4.c and IV.B.3.b on the assumption that the ton/year limits are designed to *restrict* the facility's PTE, *see* Petition at 100, 108. The Petitioners have not demonstrated, and it does not appear to the EPA, that this assumption is correct. Rather, the limits appear to *reflect* the maximum PTE of the facility's engines, as guaranteed by the manufacturers, which ADEQ turned into enforceable requirements following the comment period on the draft permit. As ADEQ states in its RTC: "[T]hese conditions were updated to reflect the manufacturer guaranteed emission limits which were also used in the emission calculations and modeling analysis. The facility-wide PTE is below the PSD thresholds." RTC at 50; *see id.* at 25.

The Petitioners' claim concerning the exclusion of formaldehyde from the tons/year limit on VOC emissions in Condition IV.B.3.b rests entirely on the premise that the limit is designed to restrict the facility's PTE in order to avoid requirements for major sources under the PSD program. The Petitioners fail to demonstrate that the limit is unenforceable or inconsistent with applicable requirements in any other way. The Petitioners' reference to the definition of VOC in the Arizona SIP is not relevant to whether ADEQ properly excluded formaldehyde from the VOCs limited by Condition IV.B.3.b since the Petitioners cite no provision of the Arizona SIP that would require such a limit include *all* VOCs. It appears that ADEQ created a limit on a subset of VOCs—all except formaldehyde. The Petitioners identify no reason (other than their arguments related to limits on PTE) why formaldehyde must be

included in such a limit and even seem to acknowledge that limits other than those on PTE, such as limits in an NSPS, can legitimately cover a subset of VOCs. *See* Petition at 109 n.20.

The Petitioners have not demonstrated their claims of unenforceability and raise no other concerns regarding the ton/year limits in Conditions IV.A.4.c and IV.B.3.b and associated compliance assurance requirements applicable to the facility's engines. The EPA, therefore, denies the Petitioners' request for an objection on this claim.

S. Claim 19: Operation and Maintenance Requirements for Engine Control Equipment

This claim is found within section II.B.5.b in the Petition.

Petition Claim: The Petitioners claim that the Permit fails to assure compliance with limits in Condition IV.B.3.b applicable to the facility's natural gas-fired engines because the Permit lacks operation, maintenance, and monitoring requirements related to add-on controls installed on the engines. *See* Petition at 109–111.

The Petitioners note that Condition IV.B.2.a requires the permittee to "install selective catalytic reduction (SCR) and oxidation catalysts (OxCat) on the natural gas engines and interlock all engines to ensure that the associated SCR and OxCat will operate at all times." *Id.* at 109 (quoting Permit at 47). However, the Petitioners claim that the Permit "lacks requirements for the operation and maintenance of the SCRs and OxCats that would ensure these add-on controls operate effectively and limit emissions at all times to at or below the applicable limits." *Id.* at 110. The Petitioners point out monitoring and other compliance assurance requirements in Condition IV.B.4 but argue that none of these apply specifically to the SCRs and OxCats. *Id.* Emphasizing the importance of effective operation of emission controls, the Petitioners state that emissions of NO_x from the engines could easily exceed applicable limits without the add-on controls. *Id.*

Finally, addressing ADEQ's RTC, the Petitioners claim that ADEQ's "response indicates that the SCRs and OxCats will need to be operated according to manufacturer's instructions and operating specifications to work effectively." *Id.* at 111 (citing RTC at 24). According to the Petitioners, this response is inadequate because the Permit lacks requirements and monitoring to ensure the controls will operate according to manufacturer's instructions and operating specifications and, moreover, the manufacturer's instructions and operating specifications are unavailable for public scrutiny. *Id.*

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

The Petitioners fail to consider several of the requirements applicable to the facility's natural gas-fired engines and thereby fail to demonstrate that the Permit's terms are insufficient to assure compliance with the limits applicable to the engines.

The Petitioners claim that the Permit lacks operational requirements for the SCR and OxCat systems. However, in Condition IV.B.2.b, the Permit requires: "Except during startup and shutdown, the Permittee shall operate the natural gas engines only from 75% and up to 100% load, including 100%

load." Permit at 47. This operational requirement is directly related to the effectiveness of the SCR and OxCat systems, as ADEQ explained in its RTC: "Peak performance of these non-emergency natural gas generators will minimize emissions. At 75% to 100% load, selective catalytic reduction and oxidation catalyst systems will be optimized. Ultimately, this compliance requirement will reduce emissions as well as offset emissions created during startups and shutdowns." RTC at 16.

Similarly, Condition IV.B.4.d requires: "The Permittee shall program interlocks on the natural gas engines to ensure they operate at 75% to 100% load except during startup and shutdown." Permit at 49. Again, ADEQ explained the relationship between the interlock requirement and the control systems:

> All engines are required to be interlocked, and the interlock automatically requires the SCR and OxCat to operate when the temperature at the catalyst achieves the manufacturer's minimum design temperature. This is the basic requirement to ensure that the units are operated properly and controls applied. Also when a control device is purchased it will have the manufacturer's instructions and operating specifications which operators will need to follow to ensure the control device works effectively.

RTC at 24.

The Petitioners address the part of this response about manufacturer's instructions and operating specifications but fail to address the rest of the response and the critical issue of the interlock requirements. 40 C.F.R. § 70.12(a)(2)(vi).

In summary, the Permit seems to contain precisely the type of requirements that the Petitioners claim it lacks related to operation of the SCR and OxCat systems, and the Petitioners have not demonstrated that further requirements are needed to assure the control devices function properly and assure compliance with the limits in Condition IV.B.3.b. The EPA, therefore, denies the Petitioners' request for an objection on this claim.

T. Claim 20: Frequency of Testing Requirements Applicable to Natural Gas-Fired Engines

This claim is found within section II.B.5.b in the Petition.

Petition Claim: The Petitioners claim that the Permit fails to set forth sufficiently frequent testing of natural gas-fired engines to assure compliance with emission limits in Condition IV.B.3.b. Petition at 110–111.

The Petitioners note that Condition IV.B.4.c[26] requires annual testing to demonstrate compliance with Condition IV.B.3.b. *Id.* at 110. However, the Petitioners state that "it is not clear how testing only once annually is sufficiently frequent enough to assure compliance with the applicable limits, particularly the hourly limits." *Id.* Referring to their arguments concerning requirements related to SCRs and OxCats, the Petitioners emphasize the need for more frequent testing given the lack of "operation and maintenance requirements" in the Permit. *Id.*

[26] The Petitioners likely meant to cite Condition IV.B.4.e.

The Petitioners claim that the TSD fails to provide a basis for the selected testing frequency and the RTC provides little more insight, merely indicating that annual testing is common in the mining industry. *Id.* at 111.

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

All title V permits must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c); *see* 40 C.F.R. § 70.6(c)(1). Determining whether monitoring contained in a title V permit is sufficient to assure compliance with any term or condition is a context-specific, case-by-case inquiry. Because the sufficiency of monitoring is a context-specific issue, in order to demonstrate a basis for the EPA's objection due to inadequate monitoring, petitioners must provide some fact-specific analysis of the permit terms in question. *See* 40 C.F.R. § 70.12(a)(2)(iii) (requiring petitioners provide "[a]n explanation of how the term or condition in the permit . . . is not adequate").

Here, the Petitioners do not present any arguments or analysis related to any specific emission unit (beyond a brief reference to their arguments concerning the requirements related to SCRs and OxCats, which the EPA addresses in Claim 19) to show that more frequent testing is required to assure compliance with the Permit's limits. The EPA, therefore, denies the Petitioners' request for an objection on this claim.

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 in part and deny in part the Petition and object to the issuance of the Permit as described in this Order.

Dated: May 30, 2025

Lee Zeldin
Administrator