BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Petition No. VIII-2024-3

In the Matter of

Mountain Coal Co., LLC, West Elk Mine

Permit No. 20OPGU411

Issued by the Colorado Department of Public Health and Environment

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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 January 30, 2024 (the Petition) from the Center for Biological Diversity and WildEarth Guardians (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. 20OPGU411 (the Permit) issued by the Colorado Department of Public Health and Environment (CDPHE) to the Mountain Coal Co., LLC, West Elk Mine in Gunnison County, Colorado. The operating permit was issued pursuant to title V of the CAA, 42 U.S.C. §§ 7661–7661f, and 5 Code of Colorado Regulations (CCR) 1001-5, Part 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 requesting that the EPA Administrator object to the Permit. Specifically, the EPA grants part of Claim 4 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 Colorado submitted a title V program governing the issuance of operating permits in 1993. EPA granted interim approval of Colorado's title V operating permit program in January 1995 and full approval in August 2000. *See* 60 Fed. Reg. 4563 (Jan.

24, 1995) (interim approval); 61 Fed. Reg. 56368 (Oct. 31, 1996) (revising interim approval); 65 Fed. Reg. 49919 (Aug. 16, 2000) (full approval). This program is codified in 5 CCR 1001-5, Part C.

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

B. Review of Issues in a Petition

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 Colorado's PSD, NNSR, and minor NSR programs as part of its SIP. *See* 40 C.F.R. § 52.320(c) (identifying EPA-approved regulations in the Colorado SIP). Colorado's major and minor NSR provisions, as incorporated into Colorado's EPA-approved SIP, are contained in portions of 5 CCR 1001-5, Parts B and D.

III. BACKGROUND

A. The West Elk Mine

Mountain Coal Company, LLC, a subsidiary of Arch Resources, Inc. (formerly Arch Coal, Inc.[10]), owns and operates the West Elk Mine, an underground coal mine located near Somerset in Gunnison County, Colorado. The mine began operating in 1982 as a room-and-pillar mine. During the 1990s, the mine expanded and moved to longwall mining techniques. Emissions from the mine come primarily from the Deer Creek and Sylvester Gulch mine ventilation air exhaust shafts (the MVA system) and various mine ventilation boreholes (MVBs) that vent air near the active face of the mining operation to manage methane at safe levels. Other emission-generating activities include coal processing, coal hauling, storage piles, storage silos, and engines. The West Elk Mine is a major source of volatile organic compound (VOC) emissions under the title V and PSD programs, and a major source of hazardous air pollutants (HAP) due to its potential to emit (PTE) n-hexane in excess of the HAP major source threshold established by title V and CAA § 112. The facility is subject to various requirements under the Colorado SIP, preconstruction permits, and various New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants.

[10] Prior to May 2020, Arch Resources, Inc. was named Arch Coal, Inc. Both the Petition and Permit refer to Arch Coal, Inc.

B. Permitting History

The West Elk Mine is subject to the requirements of various preconstruction permits issued since 1980. This is the initial title V permit for the West Elk Mine. Following a series of actions that are not directly relevant to the issues in the Petition, Mountain Coal Company, LLC applied for an initial title V permit on April 7, 2020. CDPHE published notice of a Draft Permit on May 26, 2023. The Draft Permit was accompanied by various documents, including a draft Technical Review Document. The Draft Permit was subject to a public comment period that ran until August 3, 2023, and CDPHE held a public hearing on August 3, 2023. On October 17, 2023, CDPHE submitted the Proposed Permit, along with its responses to public comments (RTC), to the EPA for its 45-day review. The EPA's 45-day review period ended on December 1, 2023, during which time the EPA did not object to the Proposed Permit. CDPHE issued the final title V permit for the West Elk Mine, along with a final Technical Review Document (TRD), on December 8, 2023. As relevant to issues in the Petition, the Permit includes, for the first time, limitations and other requirements concerning VOC emissions from the MVBs and MVA system.

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 December 1, 2023. Thus, any petition seeking the EPA's objection to the Proposed Permit was due on or before January 30, 2024. The Petition was dated and received on January 30, 2024, and, therefore, the EPA finds that the Petitioners timely filed the Petition.

D. Environmental Justice

The EPA used EJScreen[11] to review key demographic and environmental indicators within a five-kilometer radius of the West Elk Mine. This review showed a total population of approximately 66 residents within a five-kilometer radius of the facility, of which approximately seven percent are people of color and 24 percent are low income. In addition, the EPA reviewed the EJScreen Environmental Justice Indices, which combine certain demographic indicators with 13 environmental indicators. The following table identifies the Environmental Justice Indices for the five-kilometer radius surrounding the facility and their associated percentiles when compared to the rest of the State of Colorado.

EJ Index	Percentile in State
Particulate Matter 2.5	2
Ozone	12
Diesel Particulate Matter	0
Air Toxics Cancer Risk	4
Air Toxics Respiratory Hazard	2
Toxic Releases to Air	0

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

Traffic Proximity	0
Lead Paint	50
Superfund Proximity	36
RMP Facility Proximity	3
Hazardous Waste Proximity	4
Underground Storage Tanks	23
Wastewater Discharge	20

IV. EPA DETERMINATIONS ON PETITION CLAIMS

The Petition includes four claims, contained within sections I through IV of a Petition section titled Grounds for Objection. The fourth claim includes three distinct subclaims. Each are addressed in turn in the following subsections.

A. Claim 1: The Petitioners Claim That "The Title V Permit Fails to Assure Compliance with [PSD] Requirements in the Colorado [SIP]."

Petition Claim: The Petitioners claim that the title V Permit is deficient because it does not include PSD requirements of the Colorado SIP, including Best Available Control Technology (BACT) limits, that the Petitioners allege are applicable to the facility. *See* Petition at 11–23.

The Petitioners observe that title V permits must include "enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements of this chapter, including the requirements of the applicable implementation plan." *Id*. at 21 (quoting 42 U.S.C. § 7661c(a)). Further, the Petitioners observe that the U.S. Court of Appeals for the Tenth Circuit has interpreted the EPA's regulatory definition of "applicable requirement" to "unambiguously refer[] to all requirements in a state's implementation plan, such as [a state's] requirements for major [New Source Review]." *Id*. at 21–22 (quoting *Sierra Club v. EPA*, 964 F.3d 882, 890–91 (10th Cir. 2020); citing 40 C.F.R. § 70.2; 5 CCR 1001-5, Part A, I.B.12.b).

The Petitioners observe that CDPHE has acknowledged that, as of the date of permit issuance, the West Elk Mine is a major stationary source under the PSD program due to potential VOC emissions from the MVBs and MVA system. *Id*. at 13 (citing RTC at 4). That fact is undisputed; the relevant claim in the Petition focuses on whether *issuance of the present Permit* triggered PSD requirements. On this issue, the Petitioners advance two related, alternative arguments:

> In issuing the Title V Permit for the West Elk Mine, the Division, for the first time, authorized the construction and operation of a new major source. Additionally, or alternatively, the Title V Permit relaxed enforceable limits in such a way as to make the West Elk Mine a major stationary source. Accordingly, the Title V Permit was required to assure compliance with PSD permitting requirements in the Colorado SIP. It did not and the Administrator must object over the failure of the Title V Permit to assure compliance with the applicable implementation plan.

Id. at 22.

Construction of a New Major Stationary Source

First, the Petitioners claim that the West Elk Mine is subject to PSD requirements because the Permit "authorizes the construction of a new major stationary source." *Id*. at 13.[12]

The Petitioners acknowledge CDPHE's position that "the Division's action in issuing this Title V permit is not authorizing the construction of a source or emission unit creating new emissions." *Id*. at 14 (quoting RTC at 5). The Petitioners also concede "that Arch Coal's illegal VOC emission sources were 'existing' in a literal sense" prior to issuance of the Permit. *Id*.

However, the Petitioners argue that "legally the Division is incorrect that its Title V permitting action did not authorize the construction of a source or emission unit creating new emissions." *Id*. The Petitioners argue that the West Elk Mine should not be legally considered an existing source—but rather, a new source—based on the following argument:

> [F]or a stationary source to have constructed a major emitting facility and to therefore be an 'existing' major source, that source would have had to "commence" construction . . . which means the source would have had to obtain "all necessary preconstruction approvals or permits" required by federal, state, or local air quality laws and regulations. Here, . . . Arch never obtained all necessary preconstruction approvals or permits. . . . Bottomline is, the West Elk mine was not "grandfathered" as an "existing" major source . . . . Under the Colorado SIP, this means the Title V Permit for the West Elk Mine constitutes the preconstruction approval necessary to approve the construction and operation of the MVBs and MVAs and the release of up to 465 tons of VOCs annually. This means the Title V Permit does, in fact, permit the new construction of a major stationary source under the Colorado SIP. This further means the Division was required to ensure the Title V Permit assured compliance with PSD permitting requirements under the Colorado SIP.

Id. (quoting 42 U.S.C. § 7479(2)(A); citing 5 CCR 1001-5, Part A, I.B.14).

Although the Petitioners suggest that the mine as a whole should be considered a new source, *id*., the Petitioners "acknowledge . . . the fact that the West Elk Mine, as a stationary source, was first permitted to construct in 1980 or in subsequent years." *Id*. at 15. However, even if the overall mine is considered an existing stationary source, the Petitioners argue that "the permitting of the MVBs and MVAs, and the release of previously unpermitted VOC emissions, would unquestionably constitute the permitting of a physical change that constitutes a major stationary source by itself." *Id*.

For support, the Petitioners observe that the definition of "major stationary source" under the Colorado SIP includes not only the construction of a new source, but also "[a]ny physical change that would occur at a stationary source not otherwise qualifying as a major stationary source [] if the change would constitute a major stationary source by itself." *Id*. (quoting 5 CCR 1001-5, Part D,

[12] The Petitioners restate this assertion regarding the effect of the present Permit, using similar language, at least twice on page 11, three times on page 13, twice on page 14, once on page 15, three times on page 16, three times on page 17, once on page 18, and twice on page 22.

II.A.25.c).[13] Here, the Petitioners claim that the construction and operation of the MVBs and MVA system—which have potential emissions of VOC of more than 250 tons per year—represent a physical change that qualifies as a "major stationary source by itself." *Id*. The Petitioners reiterate their claim that the present Permit "for the first time" permitted the construction and operation of the MVBs and MVA system, and thus "permitted the construction of a new major stationary source." *Id*. The Petitioners again contest the idea that these physical changes were existing, arguing, again: "[B]ecause Arch Coal never obtained the necessary preconstruction approvals or permits under the Colorado SIP, construction of this 'physical change' never legally commenced and therefore was never legally constructed in the first place." *Id*.[14] The Petitioners also claim that CDPHE "did not address the issue of whether Arch Coal legally commenced construction under the Colorado SIP and therefore could validly claim that the MVBs and MVA system, and their VOC emissions, were not 'new' or otherwise 'existing.'" *Id*. at 16 (citing RTC at 4).

The Petitioners conclude:

> The Division is simply wrong in its belief that companies are allowed to illegally construct and operate major sources of air pollution in order to establish an "existing" source and avoid compliance with major source permitting requirements under the Colorado SIP. It is only now, through the issuance of the Title V Permit, that Arch Coal has obtained necessary preconstruction authorization to construct and operate the MVBs and MVA system and release VOCs. In effect, the Title V Permit represents the permitting of a new major stationary source. This means the Division was required to ensure the Title V Permit assured compliance with PSD permitting requirements under the Colorado SIP.

Id. at 15–16; *see also id*. at 14.

The Petitioners address CDPHE's position that "In order for the Division to apply BACT in this permit, the Division believes it would need to be able to determine at what point in time, and through what activities or changes at the Mine, the Mine began to emit over the regulatory thresholds to trigger PSD." *Id*. at 16 (quoting RTC at 5).[15] The Petitioners argue that CDPHE's "argument holds weight in only one situation[:] If Arch Coal was already legally permitted to construct and operate the MVBs and MVA system, and to emit VOCs." *Id*. Here, the Petitioners argue that "the Division's inquiry does not require the agency to determine if PSD was triggered based on an assessment of what activities or changes at the West Elk Mine triggered PSD and at what time," and that "the question of past VOC emissions at

[13] The Petitioners argue that "physical change" is broadly defined with limited exclusions not relevant here. Petition at 15 (citing 5 CCR 1001-5, Part D, II.A.23.d).

[14] Earlier in the Petition, the Petitioners specifically allege: "Prior to the issuance of the Title V Permit, Arch Coal was not permitted to construct or to emit VOCs from the MVBs and was not permitted under the Colorado SIP to construct or to emit VOCs from the Deer Creek ventilation shaft. Additionally, while Arch Coal was permitted to construct the Sylvester Gulch shaft under Construction Permit No. 09GU1382, it was not permitted to operate the shaft in a manner that emitted VOCs." Petition at 13.

[15] The Petitioners also claim that recent EPA statements (relied upon by CDPHE) did not address this issue. *See id*. at 16–17 n.9 (citing *In the Matter of Suncor Energy (U.S.A.), Inc., Commerce City Refinery, Plant 2 (East),* Order on Petition Nos. VIII–2022–13 & VIII–2022–14 at 67 (July 31, 2023) (*Suncor Plant 2 Order*); RTC at 5).

the West Elk Mine is not relevant" because the facility was not legally permitted to emit VOC prior to issuance of the title V permit. *Id*. at 16, 17.[16]

Instead, according to the Petitioners:

> [B]ecause Arch Coal's prior construction and emissions were illegal, the Division's inquiry starts and stops with the Title V Permit, which for the first time authorized the construction and operation of the MVBs and MVA system, and the emission of VOCs. The only question the Division must ask is, does the Title V Permit allow Arch to construct and operate the MVBs and MVA system, and if so, does it allow Arch to emit VOCs above major source thresholds? Here, the answer is yes, meaning the Division's permitting action did indeed trigger PSD requirements in the Colorado SIP by authorizing a physical change that was itself a major source.

Id. at 16.

Relaxation of an Enforceable Limitation

The Petitioners claim a second, alternative basis for finding that the Permit triggered PSD requirements: issuance of the Permit "represents the permitting of a major source under the PSD requirements of the Colorado SIP by virtue of the permit representing a relaxation in an enforceable limitation on VOC emissions that [was] previously in place." *Id*. at 18.

The Petitioners explain that, "Under the Colorado SIP, a stationary source can become a major source under PSD 'by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980, on the capacity of the source or modification to otherwise emit a pollutant[.]'" *Id*. (quoting 5 CCR 1001-5, Part D, VI.B.4; citing 40 C.F.R. § 51.166(r)(2); Permit No. O9GU1382 at 4 (Condition 13)).

Here, the Petitioners allege that "prior to the issuance of the Title V Permit, the West Elk Mine was subject to enforceable limits on VOC emissions." *Id*. More specifically, the Petitioners state that the underlying preconstruction permit "authorized no VOC emissions whatsoever from any emission unit at the Mine." *Id*. Further, the Petitioners indicate that the underlying preconstruction permit did not authorize the construction and operation of the Deer Creek ventilation shaft (one of two MVA shafts) or the MVBs. *Id*. Because the preconstruction permit stated it "is valid only for the equipment and operations or activity specifically identified on the permit," the Petitioners assert that the West Elk Mine was not permitted to emit any amount of VOCs from these units until issuance of the present Permit. *Id*. (quoting Permit No. O9GU1382 at 11 (General Condition 1)).

The Petitioners claim that the present Permit reflects a relaxation of the aforementioned "previous enforceable limitation[s] on VOC emissions from the West Elk Mine." *Id*. Specifically, the Petitioners argue: "Where Arch Coal was previously not authorized to construct the Deer Creek ventilation shaft

[16] Notwithstanding the Petitioners' position that past VOC emission levels are not relevant, the Petitioners also contest CDPHE's position that the mine's current PTE is not the same as at the time of its initial construction. *Id*. at 17 (citing RTC at 5). The Petitioners argue that "the West Elk Mine has always had the potential to emit more than 250 tons of VOCs per year" since its original construction, or since it was first issued Construction Permit No. 09GU1382, because the mine has not been subject to federally enforceable limits on VOC emissions in the past. *Id*.

and MVBs, and to emit VOCs at any amount, the Title V Permit now authorizes the construction and operation of the Deer Creek ventilation shaft and MVBs, and the release of up to 465 tons of VOCs annually." *Id*.

The Petitioners conclude: "Because this relaxation in an enforceable limitation has made the West Elk Mine a major source of VOCs, the Mine should have been subject to PSD permitting pursuant to the Colorado SIP as if construction had not yet commenced." *Id*.

Additional Considerations

The Petitioners also challenge other points raised by CDPHE related to the state's decision not to impose PSD requirements on the facility. The Petitioners argue that past enforcement actions taken by CDPHE "did not address or resolve whether the West Elk Mine should be permitted as a major source pursuant to the Colorado SIP." *Id*. at 19. The Petitioners suggest that because "Arch Coal illegally constructed its MVBs and MVA system and actually emitted more than 250 tons of VOCs per year without obtaining a major new source review permit," enforcement should require the facility to fully comply with all applicable NSR requirements. *Id*. at 19–20.

The Petitioners also address CDPHE's discussion of a statute of limitations related to PSD applicability. *See id*. at 20. The Petitioners argue that "Title V of the Clean Air Act contains no statute of limitations regarding the requirement that a permit assure compliance with applicable requirements and the applicable implementation plan" and that that the EPA's duty to object to a title V permit is similarly unconstrained by timing considerations. *Id*. The Petitioners contend that the statute of limitations cited by CDPHE does not apply to title V permitting, but instead applies to "enforcement of any civil fine, penalty, or forfeiture, pecuniary or otherwise[.]" *Id*. (quoting 28 U.S.C. § 2462); *see id*. at 21. The Petitioners also assert that the court case involving the West Elk Mine's PSD obligations was not dismissed based on a statute of limitations argument. *Id*. at 20 (citing *WildEarth Guardians v. Mt. Coal Co.*, No. 20-cv-01342-RM-STV, 2021 U.S. Dist. LEXIS 60551; 2021 WL 1186669 (D. Colo. Jan. 26, 2021)).

Finally, the Petitioners address CDPHE's discussion of "sham permitting" and the "good faith" of the source, asserting that these issues are not relevant to whether a title V permit must assure compliance with applicable PSD permitting requirements. *Id*. at 21.

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

As an initial matter, the EPA agrees with the Petitioners that the issues concerning PSD applicability are properly within the scope of the EPA's review of this Petition, given the unique circumstances present

here.[17] In situations where NSR issues are properly raised in a title V petition, the EPA applies the following framework:

> Where a petitioner's request that the Administrator object to the issuance of a title V permit is based in whole, or in part, on a permitting authority's alleged failure to comply with the requirements of its approved [NSR] program (as with other allegations of inconsistency with the Act), the burden is on the petitioner to demonstrate to the Administrator that the permitting decision was not in compliance with the requirements of the Act, including the requirements of the SIP. . . . As the permitting authority for [the state's] SIP-approved [NSR] program, [the state agency] has substantial discretion in issuing [NSR] permits. Given this discretion, in reviewing a [NSR] permitting decision in the title V petition context, the EPA generally will not substitute its own judgment for that of [the state]. Rather, consistent with the decision in *Alaska Dep't of Envt'l Conservation v. EPA*, 540 U.S. 461 (2004), in reviewing a petition to object to a title V permit raising concerns regarding a state's [NSR] permitting decision, the EPA generally will look to see whether the petitioner has shown that the state did not comply with its SIP-approved regulations governing [NSR] permitting, or whether the state's exercise of discretion under such regulations was unreasonable or arbitrary.

In the Matter of Appleton Coated, LLC, Order on Petition Nos. V-2013-12 & V-2013-15 at 5 (Oct. 14, 2016) (*Appleton Order*) (citations omitted); *see* 89 Fed. Reg. 1150, 1162 (Jan. 9, 2024).

Here, the Petitioners claim that Permit is deficient because it lacks PSD-related requirements of the SIP. To prevail, the Petitioners must demonstrate that PSD requirements are "applicable requirements" for the West Elk Mine. The Petitioners present two alternative arguments for why the facility is subject to PSD requirements: (i) because the present Permit authorizes construction of a new major stationary source, and (ii) because the present Permit reflects a relaxation in an enforceable limitation on VOC emissions. As explained in the following paragraphs, the Petitioners' first argument fails to demonstrate that PSD requirements are applicable requirements because the Petitioners make no attempt to demonstrate that specific past construction activities triggered PSD, which is the appropriate trigger under the Colorado SIP. Instead, the Petitioners incorrectly assert that issuance of the present title V Permit *itself* triggered PSD. The Petitioners' second argument also fails because the Permit did not involve a relaxation in enforceable limitations that caused the West Elk Mine to become a major stationary source. Thus, the Petitioners fail to demonstrate that PSD requirements are applicable requirements for the West Elk Mine. This conclusion reflects only the EPA's review of the arguments made by the Petitioners. Because the Petition contains no information about past

[17] The EPA's review of NSR issues in this title V Order is proper here for two reasons. First, CDPHE has not, within a title I permitting process, made any determinations about whether major NSR (as opposed to minor NSR) requirements apply to the West Elk Mine. In fact, in the current permit action, CDPHE expressly declined to make any such determination. TRD at 4–5; RTC at 3–7. Thus, there has not been any permit action that would, in the EPA's view, conclusively define the NSR-related "applicable requirements" of the SIP that apply to construction of the West Elk Mine. Accordingly, questions about which NSR-related requirements are "applicable requirements" for title V purposes are properly subject to review in this title V petition proceeding. *See, e.g.*, 89 Fed. Reg. 1150, 1164, 1169–70 (Jan. 9, 2024) (proposed rule explaining, and proposing regulatory updates to codify, the EPA's existing position on this issue). Second, the EPA acknowledges that the Tenth Circuit's ruling in *Sierra Club v. EPA,* 964 F.3d 882 (10th Cir. 2020), governs here. This Petition, similar to the petition order considered by the Tenth Circuit in that case, involves questions about whether major NSR requirements are "applicable requirements" for title V purposes.

construction activities that may have triggered PSD, the EPA cannot make a determination about whether the facility may be subject to PSD obligations.

Construction of a New Major Stationary Source

The Petitioners' first argument hinges on the Petitioners' allegation that the West Elk Mine is subject to PSD because the present Permit "*authorizes construction* of a *new* major stationary source." Petition at 13 (emphasis added). As an initial matter, the majority of this argument was not preserved in the present Petition, as it was not raised with reasonable specificity during the public comment period.[18] However, even if the Petitioners' argument had been preserved, it fails to demonstrate that CDPHE's position is contrary to the SIP or otherwise unreasonable or arbitrary. *See, e.g.*, *Appleton Order* at 5.

It is uncontested that, as of the date the Permit was issued, the West Elk Mine is a major stationary source under the PSD program due to potential VOC emissions from the MVBs and MVA system. Petition at 13; TRD at 5; RTC at 4. However, PSD requirements do not apply to a source simply because it *is* a major stationary source. Rather, the CAA requires a PSD permit prior to the *construction* of a major stationary source, which is defined to include modifications. *See* 42 U.S.C. §§ 7475(a)(1), 7479(2)(C). Under regulations implementing this requirement in Colorado, a PSD permit is required to construct a new major stationary source or to make a "major modification"[19] to an existing major stationary source. 5 CCR 1001-5, Part D, I.A.1.; *see also* 40 C.F.R. § 51.166(a)(7) (EPA regulations

[18] The Petitioners identify two sets of public comments underlying this claim, included as Petition Exhibit 4 (CBD Comments) and Exhibit 5 (WEG Comments). Petition at 11. The CBD Comments raised concerns related to PSD applicability, but they are fundamentally different from the first argument now presented in Petition Claim 1. *See* CBD Comments at 1–4 (asserting that the source's initial construction triggered PSD and criticizing CDPHE's decision not to evaluate whether specific past modifications occuring after initial construction constituted major modifications). Most of the arguments in the WEG Comments similarly involved fundamentally different issues concerning PSD applicability than the arguments now raised in the Petition. *See* WEG Comments at 2–3 (similar bases for PSD applicability as the CBD Comments). However, the WEG Comments also alleged that the present Permit effectively authorized construction of a new stationary source. WEG Comments at 4. Although this general allegation aligns with the Petitioners' first argument, essentially none of the arguments or legal theories now advanced in the Petition to support this general allegation were raised in those comments. Instead, the public comments advanced different theories for why the present Permit authorized construction of a new stationary source, focusing on the definition of the term "construction" and alleging that the permit authorizes a physical change or a change in method of operation that would increase actual emissions. *Id*. By contrast, the Petition contains no discussion of the definition of the term "construction" or the idea that the Permit increases actual emissions. Instead, as explained in the following paragraphs, the Petition focuses on the Petitioners' view that the present Permit authorizes the construction of a new source, or a physical change that would itself be considered a new source, because the source did not "commence construction" until issuance of the present Permit. These Petition arguments are based on the Petitioners' theories about the definition of "commence construction" and the requirement to obtain all necessary preconstruction approvals before construction is commenced. Because the basis for the Petitioners' present argument is fundamentally different from the basis advanced in public comments, it was not raised "with reasonable specificity during the public comment period." Moreover, the Petitioners do not allege that it was impractical to do so during the public comment period, nor that the grounds for objection arose after the public comment period. This presents a basis for the EPA to deny this part of Claim 1. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. §§ 70.8(d), 70.12(a)(2)(v). Elsewhere in the Petition, the Petitioners alternatively request that the Petition be considered a petition to reopen the Permit for cause if the EPA determines that any petition claims were not raised in public comments. Petition at 10. Even if this argument had been squarely raised in public comments, or if the EPA were to consider the Petitioners' argument under the discretionary lens of reopening for cause under CAA § 505(e) and 40 C.F.R. § 70.7(g) and (f), it would present no basis to object to or reopen the Permit, for the reasons explained in the following paragraphs.

[19] Here, the Petitioners do not assert there was a major modification at the existing West Elk Mine; all Petition arguments relate to the alleged authorization of the construction of a major stationary source by this Permit. *See* Petition at 12–23.

identifying required content for PSD programs in SIPs). Further, as the Petitioners and CDPHE discuss, construction of a new major stationary source can occur either when a wholly new stationary source is built, or when an existing stationary source that is not yet major makes a physical change that would constitute a major stationary source by itself. 5 CCR 1001-5, Part D, II.A.25.c; Petition at 12–13, 15–16; TRD at 2; RTC at 4; *see also* 40 C.F.R. § 51.166(b)(1)(i)(*c*). The Colorado SIP defines "construction" as "[a]ny physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in actual emissions." 5 CCR 1001-5, Part D, II.A.12; *see also* 40 C.F.R. § 51.166(b)(8). Moreover, Colorado's SIP regulations specify that a permit containing PSD requirements is required for a major stationary source that "begin[s] actual construction," defined as the "[i]nitiation of physical on-site construction activities on an emissions unit that are of a permanent nature," among other things. 5 CCR 1001-5, Part D, I.A.1, II.A.7; *see also* 40 C.F.R. § 51.166(a)(7)(iii), (b)(11).

Consistent with this framework, CDPHE states that it could only impose PSD requirements (including BACT) to construction of a new major stationary source or a major modification of an existing major stationary source. *See* RTC at 4–5. CDPHE further states: "It is important to recognize that the Division's action in issuing this Title V permit is not authorizing the construction of a source or emission unit creating new emissions." *Id*. at 5; *see* TRD at 7 ("[T]his permit action does not contain a major modification or a new major stationary source, thus BACT does not apply."). Accordingly, most of CDPHE's permit record focuses on whether any particular *past* construction activity reflected a new major stationary source (or major modification), triggering PSD:

> In order for the Division to apply BACT in this permit, the Division believes it would need to be able to determine at what point in time, and through what activities or changes at the Mine, the Mine began to emit over the regulatory thresholds to trigger PSD. The EPA has offered support for this determination that major NSR reviews apply, "at the time the source *begins actual construction."*

RTC at 5 (quoting *Suncor Plant 2 Order); see* TRD at 4–5; RTC at 5–7.

The EPA agrees with CDPHE that determining whether any past construction activity constituted the construction of a major stationary source or major modification is the relevant question for determining whether the West Elk Mine is subject to PSD requirements. The Petitioners do not identify any such past construction activities and provide no information to demonstrate that the West Elk Mine triggered PSD at some point in the past by beginning actual construction of a new major stationary source or a major modification.[20]

[20] Although the Petitioners do not now argue that any specific past construction activity triggered PSD, public commenters *did* attempt some of these arguments. *See* CBD Comments at 1–4 (asserting that the initial construction of the mine in 1980 triggered PSD, and encouraging CDPHE to evaluate whether subsequent physical changes constituted major modifications that would have also triggered PSD); WEG Comments at 2–3 (expressing concern that CDPHE did not assess whether "past VOC emissions, construction, and/or modifications" triggered PSD, and specifically identifying certain past construction projects that may have involved emission increases). The Petition does not repeat those arguments. Only two portions of the Petition begin to touch on potentially relevant arguments related to actual construction activities. First, the Petitioners allege that "construction and operation of the MVBs and MVA system . . . represents a major stationary source by itself," and that "Arch Coal illegally constructed its MVBs and MVA system and actually emitted more than 250 tons of VOCs per year without obtaining a major new source review permit." Petition at 15, 19–20 (internal quotations omitted). This

Instead of engaging with the possibility that past construction activities triggered PSD applicability, the Petitioners incorrectly assert that "the question of past VOC emissions at the West Elk Mine is not relevant." Petition at 17. The Petitioners argue that it is the present Permit that triggered PSD; according to the Petitioners, the PSD applicability "inquiry starts and stops with the Title V Permit." *Id*. at 16. Specifically, the Petitioners claim that the West Elk Mine is subject to PSD because the *present Permit* "authorizes construction of a new major stationary source." *Id*. at 13. This is unpersuasive for two key reasons: first, the Petitioners do not accurately characterize the effect of the present Permit; and second, the Petitioners do not accurately describe how the issuance of a permit, and the concept of "commence construction," fit within the PSD applicability framework of the CAA and the Colorado SIP.

The Petitioners argue that the Permit for the first time authorizes the *construction* of a *new* source of emissions, while CDPHE argues that the Permit for the first time includes limits on an *existing* source of emissions. Specifically, CDPHE explains: "There is a distinction between an action to permit pre-existing emissions and an action to permit the construction of a major stationary source. It is important to recognize that the Division's action in issuing this Title V permit is not authorizing the construction of a source or emission unit creating new emissions." RTC at 5. The EPA finds CDPHE's position more consistent with the facts. As a literal and practical matter, the present Permit does not authorize any *construction* activities at the West Elk Mine, and the Permit is not associated with a *new* major stationary source or any new emission units.

The Petitioners do not identify any Permit terms authorizing construction of the units at issue, and the EPA's review of the Permit did not reveal any such terms. To be sure, the Permit includes new limitations on VOC emissions from existing units that were not previously subject to such limits. *See* Permit at 5, 27–28 (VOC limits on emissions from MVBs and MVA system). However, this does not mean the Permit authorized *construction* of those units. To the contrary, the Permit expressly acknowledges that the relevant units (MVBs and MVA system) were constructed or modified long in the past: between 1981 and 2001. *See* Permit at 3 (identifying the construction dates of emission units regulated by the Permit). As a literal matter, CDPHE is correct to state: "The Mine has been in operation for many decades. The Mine is not a 'new' major stationary source . . . ." RTC at 4.

The Petitioners do not dispute the reality of the situation or allege that a new major stationary source has actually been constructed in association with this Permit, thus triggering PSD. In fact, the

argument implicitly presupposes that construction of the MVBs and MVA system should be considered a single construction project. It is not clear from the limited record before the EPA whether this is an appropriate assumption, particularly given the many years that separate actual construction of these emission points, among other factors. In any case, the Petitioners do not further pursue these lines of reasoning or provide any information or evidence to support these brief suggestions that the facility became subject to PSD due to any specific past construction activities. Instead, the Petitioners disavow the idea that *past* construction activities or emissions are relevant to PSD applicability, focusing exclusively on the effect of the *present* Permit. *See*, *e.g.*, Petition at 15, 17. Second, the Petitioners briefly allege that the source has had a PTE of over 250 tons of VOC per year either since its initial construction or since the original issuance of Construction Permit No. 09GU1382. *See* Petition at 17. This allegation is based on the fact that the mine was not subject to federally enforceable limits on VOC emission in the past. The prior lack of enforceable limits on VOC emissions is not dispositive in determining the facility's initial PTE. This discussion in the Petition also overlooks relevant portions of the permit record that address why, in CDPHE's view, the West Elk Mine was not a major source when initially constructed. *See* RTC at 5; TSD at 4–5; 40 C.F.R. § 70.12(a)(2)(vi); *supra* note 9 and accompanying text.

Petitioners concede multiple times that the source (and relevant emission units) are literally existing. For example, the Petitioners agree "that Arch Coal's . . . VOC emission sources were 'existing' in a literal sense" prior to issuance of the Permit. Petition at 14. The Petitioners also "acknowledge it could be argued the MVBs and MVA are 'existing' sources by virtue of the fact that the West Elk Mine, as a stationary source, was first permitted to construct in 1980 or in subsequent years." *Id*. at 15. Overall, the Petitioners' argument that the Permit authorizes the construction of a new major stationary source (or a physical change that would itself be considered a new major stationary source) is not supported by the terms of the Permit or the uncontested facts.[21]

The Petitioners' argument requires one to set aside these facts about the facility's actual existence. Instead, the Petitioners' argument is based on a legal theory that the West Elk Mine (or the collection of MVBs and the MVA system) is a "new" source, as opposed to an existing source, because the mine did not previously "commence construction," because the mine did not previously receive preconstruction permits authorizing VOC emissions from these units. Put another way, the Petitioners' argument is that the present Permit for the first time authorizes "construction" of those units insofar as VOC emissions are concerned, because prior permits did not contemplate or expressly authorize VOC emissions from these units. But even if the present Permit could be considered to retroactively "authorize" emissions because it is the first permit to contain limits on VOC emissions from these units, the Petitioners have not demonstrated that such an "authorization" of emissions equates to construction (*i.e.*, a physical charge or change in the method operation that would result in a change in emissions) that would trigger PSD requirements. This is because the Petitioners do not accurately describe how issuance of a permit, and the concept of "commence construction," fit within the PSD applicability framework.[22]

The Petitioners' theory is not supported by the statutory and regulatory provisions that govern which types of activities trigger PSD requirements. Section 165 of the CAA states:

> No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless—(1) a permit has been issued for such proposed facility in accordance with this part setting forth emission limitations for such facility which conform to the requirements of this part[.]

42 U.S.C. § 7475(a)(1). The statute also provides that construction is not legally "commence[d]" for purposes of this provision until a source obtains all necessary preconstruction approvals, among other requirements. 42 U.S.C. § 7479(2)(A); *see* 5 CCR 1001-5, Part A, I.B.14; *see also* 40 C.F.R. § 51.166(b)(9).

[21] This is true with respect to both of the Petitioner's theories regarding the genesis of a new major stationary source: either (i) that the entire source is new, or (ii) that the overall stationary source may have been existing, but physical changes associated with the MVBs and MVA system constituted a major stationary source in themselves. *See* 5 CCR 1001-5, Part D, II.A.25.c; *see also* 40 C.F.R. §§ 51.166(b)(1)(i)(*c*). Because the Permit does not authorize the construction of the entire source or of the MVBs and MVA system, neither of the Petitioner's theories demonstrate that PSD requirements should apply.

[22] Most of the Petitioners' arguments are based on the idea that first issuance of a permit that "authorizes" construction is itself the act of construction that triggers PSD obligations, based on the definition of commence construction. *See* Petition at 13–17. The Petitioners also suggest that evaluating past construction activities to determine when PSD-triggering construction *actually* occurred is only relevant in one situation: if the source had already received a required preconstruction permit authorization, and therefore legally commenced construction. *See* Petition at 16. All of the Petitioners' arguments therefore depend on the commencement of construction as the key predicate for PSD applicability.

However, as defined in the relevant statutory and regulatory provisions, the concept of "commence construction" has a relatively narrow role in the PSD program. The date that construction is commenced is primarily relevant when determining whether a source that commenced construction prior to August 7, 1977, is grandfathered from the requirement to obtain a PSD permit (and similar concepts revolving around statutory and regulatory cutoff dates for different pollutants). *See, e.g.*, 42 U.S.C. § 7475(a)(1); 5 CCR 1001-5, Part B, I.A; 5 CCR 1001-5, Part D, II.A.6.b; *see also, e.g.*, 40 C.F.R. §§ 51.166(b)(13)–(14), 52.21(r)(1). That question is not presented here, as no parties argue that construction of the West Elk Mine commenced prior to 1977. *See* TRD at 4.[23]

Instead, the issue here concerns what types of actions trigger the obligation to comply with PSD requirements. Neither the statute nor the regulations indicate that that the obligation to obtain a permit that satisfies PSD requirements is triggered by "commenc[ing]" construction. Instead, section 165(a) of the CAA uses the term "constructed." The statute defines "construction" to include modifications, but it does not further specify which activities constitute construction. *See* 42 U.S.C. § 7479(2)(C). The relevant CDPHE and EPA regulations provide more detail and identify the specific type of "construction" that triggers PSD requirements. Again, construction is defined as "[a]ny physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in actual emissions." 5 CCR 1001-5, Part D, II.A.12; 40 C.F.R. § 51.166(b)(8).[24] Additionally, the regulations make it clear that, regardless of whether construction is of a new source or a major modification, the relevant triggering event is beginning actual construction of the source or modification. Specifically, the relevant Colorado SIP provisions governing major NSR state: "Any new major stationary source or major modification, to which the requirements of this Part D apply, shall not *begin actual construction* in a nonattainment, attainment, or unclassifiable area unless a permit has been issued containing all applicable state and federal requirements." 5 CCR 1001-5, Part D, I.A.1 (emphasis added). The corresponding EPA regulations are substantively identical. 40 C.F.R. § 51.166(a)(7)(iii). The bottom line, as CDPHE correctly observes, is that PSD is triggered by beginning actual construction of a new stationary source or a major modification, and not by commencing construction. *See Suncor Plant 2 Order* at 67; RTC at 5.[25]

[23] The date a source commences construction is also relevant in other situations not addressed in the Petition, such as when determining whether a source commenced construction within 18 months after receiving a permit, in order to avoid permit expiration (and related concepts). *See, e.g.*, 5 CCR 1001-5, Part B, III.F.4.a; 40 C.F.R. §§ 51.166(j)(4), 52.21(r)(2).

[24] As discussed earlier in this response, the Petitioners do not identify any specific construction projects that reflect a physical change or change in the method of operation that would result in a change in actual emissions.

[25] The EPA disagrees with the Petitioners' suggestion that the EPA's discussion of PSD applicability in the *Suncor Plant 2 Order* is not relevant here. *See* Petition 16–17 n.9. Although *Suncor Plant 2* involved different facts, the same core principle also applies here: the obligation to obtain a PSD permit results from *beginning actual construction* on a new major source or major modification. As applied to questions about whether construction of a new major stationary source triggered PSD, the EPA's discussion from *Suncor Plant 2* could be restated as follows: For a new major stationary source, major NSR applicability is determined by requirements in effect at the time a party begins actual construction of a new major stationary source. Specifically, the relevant SIP requirement states: "Any new stationary source . . . to which the requirements of this Part D apply, shall not *begin actual construction* in a nonattainment, attainment, or unclassifiable area unless a permit has been issued containing all applicable state and federal requirements." 5 CCR 1001-5, Part D, I.A.1 (emphasis added). Thus, for construction that would constitute a new major stationary source, (i) a source is required to obtain a major NSR permit prior to beginning actual construction, and (ii) a source would be in violation of major NSR requirements if it began actual construction without obtaining an NSR permit under requirements in effect at that time. Viewed from either angle, the relevant inquiry is whether the source constitutes a new major stationary source at the time the source *begins actual construction.*

Thus, notwithstanding the similarity between the terms "commence construction" and "begin actual construction," each has a distinct function. Moreover, each term has a distinct legal meaning. Again, as relevant to new sources and physical changes at existing ones, the term "begin actual construction" is defined as: "Initiation of physical on-site construction activities on an emissions unit that are of a permanent nature. . . ." 5 CCR 1001-5, Part D, II.A.7; *see also* 40 C.F.R. § 51.166(b)(11). By contrast, the term "commence" (in the context of PSD construction) is defined with different criteria, including that "the owner or operator has obtained all necessary preconstruction approvals or permits." 42 U.S.C. § 7479(2)(A); 5 CCR 1001-5, Part A, I.B.14; 40 C.F.R. § 51.166(b)(9).[26] Importantly, the requirement to obtain all necessary preconstruction approvals or permits is a prerequisite only for commencing construction, and this criterion is not directly relevant to whether (or when) a source begins actual construction and therefore triggers PSD.

The Petitioners do not explain why they think commencing construction is more relevant to PSD applicability than beginning actual construction. Essentially, the Petitioners ignore the relevant regulatory framework (which CDPHE relied on in its permit record) [27] and instead assert an entirely new test for PSD applicability that is not supported by the statute or regulations.[28]

In summary, the Petitioners' first argument fails to demonstrate PSD requirements are applicable, as both a practical and a legal matter, because it relies exclusively on the issuance of the present Permit as the event that triggers PSD. PSD-triggering construction occurs when a source begins actual construction (*i.e.*, by the initiation of on-site activities). The Permit does not authorize any construction, whether of a new major stationary source or a physical change at an existing one. The fact that the Permit is the first document to place a limitation on VOC emissions from the MVBs and

[26] Specifically, the statute provides: "The term "commenced" as applied to construction of a major emitting facility means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (i) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (ii) entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed within a reasonable time." 42 U.S.C. § 7479(2)(A). The regulations cited in the text contains similar criteria.

[27] CDPHE's permit record focuses on the concept of beginning actual construction as the relevant PSD applicability trigger. *See* RTC at 5. CDPHE's permit record does not contain any direct rebuttal to the Petitioners' novel arguments about legally commencing construction, *see* Petition at 16, because those legal theories were not raised in public comments. *See supra* note 18 and accompanying text.

[28] The Petitioner's suggested PSD applicability framework is problematic for additional reasons. First, it would broaden the statute and regulations and impose PSD requirements on sources that are not legally subject to PSD. Specifically, under the Petitioner's logic, any existing major source that obtains a permit acknowledging emissions above the major source levels would be subject to PSD. *See, e.g.*, Petition at 16 ("The only question the Division must ask is, does the Title V Permit allow Arch to construct and operate the MVBs and MVA system, and if so, does it allow Arch to emit VOCs above major source thresholds?"). This essentially makes *being* a major stationary source the triggering event for PSD. But there are multiple situations under which a source that is currently a major stationary source might never have undertaken construction that triggered PSD. Second, the Petitioners' apparent attempt to broaden the PSD applicability framework would also have the perverse outcome of narrowing it in other ways. Specifically, if the commencement of construction was the relevant PSD-triggering event, then a source could not trigger PSD until a permit is issued (since permit issuance is a prerequisite for a source to legally commence construction). Thus, by the Petitioner's logic, if such a permit is never obtained, the source would not have commenced construction, and thus never triggered NSR. This would make it impossible for the EPA, states, and citizens to pursue enforcement over a source's failure to obtain a required major NSR permit. That is clearly not a reasonable proposition. That is why the EPA's and CDPHE's regulations indicate that *beginning actual construction* triggers PSD, regardless of whether a facility did or did not obtain the required preconstruction permits before doing so.

MVA system does not establish that the facility began actual construction of a new major stationary source.[29] If anything triggered PSD at the West Elk Mine, it would have been the actual construction of a new major stationary source (or major modification[30]) at some time in the past. But the Petitioners do not identify any specific change at the source that increased emissions, much less demonstrate that such construction occurred. Instead, again, the Petitioners incorrectly assert that an assessment of past construction activity is "not relevant." Petition at 17. Because the Petitioners have failed to demonstrate a valid basis for concluding that PSD requirements are applicable to the West Elk Mine, the EPA denies this part of Claim 1.

Relaxation of an Enforceable Limitation

The Petitioners present an additional, alternative basis for their claim that the present Permit itself triggered PSD. They allege that the Permit represents "a relaxation in an enforceable limitation on VOC emissions that [was] previously in place." Petition at 18.

As an initial matter, this argument was not raised during the public comment period, and the Petitioners do not allege that it was impractical to do so during the public comment period, nor that the grounds for objection arose after the public comment period. Accordingly, it is barred by CAA § 505(b)(2), and the EPA denies this part of the claim on that basis. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. §§ 70.8(d), 70.12(a)(2)(v). Nonetheless, even if this argument within Claim 1 had been squarely raised in public comments, it would present no basis for EPA's objection to the Permit, for the following reasons.[31]

As the Petitioners observe, the SIP provides:

> The [PSD] requirements of this Part D shall apply at such time that any stationary source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation that was established after August 7, 1980, on

[29] In other words, even if one were to accept the Petitioners' argument that construction of the West Elk Mine (or its MVBs or MVA system) did not legally "commence" until the present permit action (because the mine did not obtain the necessary permit approvals until now), it does not follow that issuance of the present Permit resulted in the source triggering PSD. As explained in this Order, this is because commencing construction (and the issuance of a permit) does not trigger PSD; beginning actual construction does. The Petitioners' view reverses the relationship between PSD applicability and the issuance of preconstruction permits. Obtaining a preconstruction permit is not the act that triggers PSD obligations. Instead, obtaining a preconstruction permit is a requirement if beginning *actual* construction of a major source or major modification would trigger PSD obligations. Specifically, for sources that are subject to PSD, the statute and regulations require that the owner or operator obtain a permit that satisfies various requirements prior to beginning construction. 42 U.S.C. § 7475(a)(1); 5 CCR 1001-5, Part D, I.A.1; 40 C.F.R. § 51.166(a)(7)(iii). However, a requirement to obtain a preconstruction permit is not itself a factor in determining whether PSD is applicable in the first instance. In short, when triggered, PSD gives rise to an obligation to obtain a preconstruction permit, but not the other way around.

[30] As noted previously, the Petitioners do not allege there was a major modification at this facility, so the EPA's response does not address that potential PSD trigger.

[31] As noted previously, elsewhere in the Petition, the Petitioners alternatively request that the Petition be considered a petition to reopen the Permit for cause if the EPA determines that any petition claims were not raised in public comments. Petition at 10. Even if the EPA were to consider the Petitioners' argument under the discretionary lens of reopening for cause under CAA § 505(e) and 40 C.F.R. § 70.7(g) and (f), it would present no basis to reopen the Permit, for the reasons explained in the following paragraphs.

> the capacity of the source or modification to otherwise emit a pollutant such as a restriction on hours of operation.

5 CCR 1001-5, Part D, VI.B.4; *see also* 40 C.F.R. § 51.166(r)(2) (substantively identical EPA regulation). However, the Petitioners have not demonstrated that the current Permit action reflects such a relaxation.

First, the Petitioners have not demonstrated that, "prior to the issuance of the Title V Permit, the West Elk Mine was subject to enforceable limits on VOC emissions." Petition at 18. The Petitioners do not identify any specific, enforceable limits on VOC emissions in prior permits. In fact, to support a different argument, the Petitioners twice refer to the "previous *lack* of any federally enforceable limits on VOC emissions." Petition at 17 (emphasis added). To support this petition argument, the Petitioners infer a prohibition on VOC emissions from the *absence* of any prior permit terms authorizing VOC emissions, and the absence of any specific authorization for the construction and operation of the MVBs and the Deer Creek ventilation shaft (one of two MVA shafts). *See id*. at 18. Specifically, this part of the Petitioners' argument hinges on a prior permit term indicating that the permit "is valid only for the equipment and operations or activity specifically identified on the permit." Permit No. O9GU1382 at 11 (General Condition 1). To the extent this permit term reflected any sort of prohibition on VOC emissions, it was implicit at best. In any case, such an implicit restriction is fundamentally different from the type of enforceable limitation contemplated by this regulatory basis for PSD applicability. The regulation's reference to an "enforceable limitation . . . on the capacity of the source or modification to otherwise emit a pollutant such as a restriction on hours of operation" refers to situations where a source originally accepted specific permit limits *in order to enable avoidance of major NSR*, only to later relax such limitations. 5 CCR 1001-5, Part D, VI.B.4; 45 Fed. Reg. 52676, 52689 (Aug. 7, 1980).

Second, even assuming for the sake of argument that the present Permit, by "authorizing" VOC emissions for the first time, did involve a relaxation of previous enforceable limitations on VOC emissions, the Petitioners have not demonstrated that the West Elk Mine "bec[ame] a major stationary source . . . solely by virtue of" this relaxation. 5 CCR 1001-5, Part D, VI.B.4. As explained earlier in this response, *supra* page 14, the West Elk Mine is an existing major stationary source, and thus it became a major stationary source of VOCs before the issuance of the title V Permit that is the subject of the Petition. *See* Petition at 12; TRD at 5; RTC at 4. Issuance of this Permit did not *cause* the facility to become a major stationary source, nor was the Permit the "sole[]" cause. The facility is—and has been—a major source. To the extent that anything triggered the obligation for the source to obtain a PSD permit, it was not the issuance of the present Permit, but rather the past construction of a major stationary source (or, potentially, a major modification of an existing major stationary source).

Overall, the Petitioners' second argument presents no basis for EPA to conclude that the facility triggered PSD by virtue of the issuance of the present Permit, or accordingly for the EPA to object to the Permit. The EPA therefore denies this part of Claim 1.

Additional Considerations

The EPA's decision in this Order does not mean the EPA agrees with all of CDPHE's reasoning. For example, although CDPHE was correct to focus on past construction activities, the EPA does not necessarily agree with CDPHE that "it is not possible for the Division to ascertain when the Source

exceeded the major stationary source threshold, and thus cannot evaluate any historic mine operations which may have otherwise been considered major modifications," or that the difficulty in establishing such a date presents a valid basis for refusing to undertake such analysis in the present permit action. TRD at 5; *see id*. at 4–5; RTC at 3–5.

Additionally, the EPA agrees with the Petitioners that CDPHE's discussion of the statute of limitations is not directly relevant to the present permitting action. The statute of limitation in 28 U.S.C. § 2462, on its face, applies to "enforcement of any civil fine, penalty, or forfeiture . . . ." Although this might be relevant to an enforcement action against a source that failed to obtain a required PSD permit, it is not directly relevant to determining whether PSD requirements are "applicable requirements" that must be included in a title V permit.

Importantly, these points of disagreement do not change the fact that the Petitioners have failed to demonstrate that PSD requirements are applicable requirements associated with any particular construction activities at the West Elk Mine.

Finally, CDPHE's position does not, as the Petitioners contend, allow sources to illegally construct and operate major sources and then later claim that the sources are not new, thus avoiding compliance with PSD requirements. Petition at 15.[32] PSD obligations are triggered by actual construction, regardless of whether the source received a PSD permit prior to that construction. So, although the subsequent issuance of the Permit did not, in and of itself, trigger PSD obligations (as explained earlier in this response), it also does not in any way allow the West Elk Mine to avoid compliance with any PSD obligations that may have been actually triggered by past construction activities.[33]

B. Claim 2: The Petitioners Claim That "The Title V Permit Fails to Assure Compliance with Maximum Achievable Control Technology [MACT] Requirements Under the Clean Air Act."

Petition Claim: The Petitioners claim that the Permit fails to include applicable case-by-case MACT requirements under CAA § 112(g), based on similar theories to those advanced in Claim 1. *See* Petition at 23–26.

The Petitioners claim that under CAA § 112, a major source of HAP (with potential emissions of more than 10 tons per year of any single HAP or 25 tpy of a combination of HAPs) must meet MACT requirements. *Id*. at 23 (citing 42 U.S.C. § 7412(a)(1), (d)). The Petitioners further state that where the EPA has not promulgated applicable MACT requirements for a new major source of HAP, that source must comply with MACT as determined on a case-by-case basis. *Id*. at 23–24 (citing 42 U.S.C. § 7412(g)(2); 40 C.F.R. § 63.40). More specifically, the Petitioners note that this case-by-case MACT requirement applies when an owner or operator "constructs" a major source of HAP. *See id*. at 25

[32] The Petitioners' concern presupposes that the source was illegally constructed. The EPA understands the Petitioners' reference to illegal construction to mean that the West Elk Mine constructed a major stationary source without first obtaining a PSD permit. As previously explained, the Petitioners have not demonstrated that the West Elk Mine was ever actually illegally constructed insofar as PSD is concerned, and the EPA offers no view in this Order as to whether there were in fact changes at this facility that triggered PSD.

[33] The Permit contains no permit shield definitively establishing the non-applicability of PSD requirements. *See* 42 U.S.C. § 7661c(f)(2); 40 C.F.R. § 70.6(f)(1)(ii).

(citing 40 C.F.R. § 64.43(a)). The Petitioners observe that the definition of "construct a major source" includes the "fabricat[ion], erect[ion], or install[ation] at any developed site [of] a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP." *Id*. at 24 (quoting 40 C.F.R. § 63.41).

Here, the Petitioners state that the West Elk Mine has potential emissions of 18.92 tons per year of n-hexane and is therefore a major source of HAP. *Id*. at 24. Further, the Petitioners observe that the EPA has not yet promulgated MACT requirements for coal mines. *Id*. Finally, the Petitioners argue that the present Permit effectively authorizes the construction of a new major source of HAP, thus triggering the case-by-case MACT requirements of 112(g). *Id*. at 23, 24.

The Petitioners dispute CDPHE's position that case-by-case MACT requirements are not applicable "[b]ecause this permit action did not include a new or reconstructed source which was major for HAP[.]" *Id*. at 24 (quoting RTC at 16). The Petitioners claim that CDPHE's "response defies logic and the law." *Id*.

The Petitioners' arguments concerning the effect of the present Permit are similar to those presented in Claim 1 with respect to PSD applicability. For example, the Petitioners claim: "The Title V Permit effectively permits a new major source of HAP emissions under the Clean Air Act. For the first time, the Title V Permit authorizes the construction and operation of the MVBs and the MVA system at the West Elk Mine . . . ." *Id*. at 23.[34] The Petitioners elaborate, claiming:

> While the Title V Permit may not permit the construction of the West Elk Mine as a brand new stationary source, the Title V Permit, for the first time, authorizes the "fabricat[ion], erect[ion], or install[ation] at any developed site a new process or production unit [specifically, the MVBs and MVA system] which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP[.]" The definition of "process or production unit" means "any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product." Here, the MVBs and MVA system constitute a collection of structures or equipment that process material inputs (*i.e.*, vent gas) so that the West Elk Mine can produce coal.

Id. at 24 (quoting 40 C.F.R. § 63.41 (alterations in Petition)).

The Petitioners challenge CDPHE's position that this permitting action does not authorize a new or reconstructed source of HAP, arguing that "the Division does not explain in the TRD or response to comments how it reached this conclusion or on what legal grounds this conclusion is based." *Id*. at 25.

The Petitioners characterize CDPHE's position as allowing sources to illegally construct and operate major sources and then claim that the sources are not new or reconstructed, thus avoiding compliance with MACT requirements. *Id*. at 24. The Petitioners address the persistence of 112(g) requirements once triggered, asserting: "[T]he duty to comply with case-by-case MACT requirements does not dissolve because illegal construction concluded. Rather, case-by-case MACT remains an applicable

[34] The Petitioners restate this assertion regarding the effect of the present Permit three more times on page 24, and once on page 25.

requirement so long as an operator 'constructs,' meaning that construction has occurred." *Id*. at 25. Further, the Petitioners rely on federal district court case that, according to the Petitioners, held that case-by-case MACT requirements apply so long as an operator constructs an applicable major source. *Id*. (citing *WildEarth Guardians v. Lamar Utils. Bd*., 932 F. Supp. 2d 1237, 1247 (D. Colo. 2013)). The Petitioners argue that here, similar to that case, "Arch Coal is not relieved of the responsibility of complying with the Section 112(g) simply because construction of the MVBs and MVA system has occurred." *Id*.

The Petitioners conclude by claiming that title V permits must include all applicable requirements, including requirements under section 112. *Id*. at 25–26 (citing 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.2). The Petitioners then imply that case-by-case MACT requirements under CAA § 112(g) are applicable requirements with which the Permit must assure compliance. *See id*. at 26. Because the Permit does not include such requirements, the Petitioners request the EPA's objection. *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 West Elk Mine is subject to case-by-case MACT requirements of CAA § 112(g). This conclusion reflects only the EPA's review of the arguments made by the Petitioners. The EPA has made no determination about whether the facility may be subject to case-by-case MACT obligations for reasons not addressed in the Petition.

The applicability framework associated with CAA § 112(g) can be summarized as follows: A source that is not otherwise covered by an EPA-promulgated MACT standard is required to obtain a case-by-case MACT determination under CAA § 112(g) and comply with the corresponding MACT limits if the owner or operator constructs or reconstructs any major source of HAP *after the effective date of the section 112(g) program*. 42 U.S.C. § 7412(g)(2)(B); 40 C.F.R. §§ 63.41 (definition of "effective date of section 112(g)(2)(B) in a State or local jurisdiction"), 63.42(c), 63.43(a).

Here, it appears uncontested that the West Elk Mine is currently a major source of HAP because its potential emissions of n-hexane exceed 10 tons per year. However, a source is not subject to section 112(g) merely by virtue of *being* a major source of HAP. Instead, similar to the PSD applicability issues addressed in Claim 1, section 112(g) applicability is based on whether and when a major source of HAP is "*constructed* or reconstructed."[35] If construction of a major source occurs *after the effective date of a permitting authority's section 112(g) program*, then section 112(g) case-by-case MACT requirements would be "applicable requirements" for title V, and their absence from the Permit would warrant an EPA objection.

CDPHE suggests that the current permit action did not *itself* give rise to 112(g) obligations "[b]ecause this permit action did not include a new or reconstructed source which was major for HAP." TSD at 10; RTC at 16. The Petitioners take the opposite position.

As explained in the following paragraphs, the Petitioners fail to demonstrate that the West Elk mine constructed a major source of HAP after the effective date, such that section 112(g) requirements

[35] Neither the Petitioners nor CDPHE address the potential reconstruction of the facility, so this Order focuses solely on construction.

would be applicable. In short, this is because the entirety of the Petitioners' argument is based on a fundamentally flawed premise (similar to Claim 1): that issuance of the present Permit equates to authorizing "construction" of a new major source of HAP. Petition at 23, 24. Similar to Claim 1, there are two key flaws with the Petitioners' argument: first, the Petitioners inaccurately characterize the effect of the present Permit; and second, the Petitioners misunderstand the types of activities that trigger section 112(g) requirements.

The record does not support the Petitioners' suggestion that the Permit authorizes the *construction* of a *new* major source of HAP. The Petitioners do not identify (and the EPA cannot locate) anything in the record suggesting that the mine is undergoing, has recently undergone, or plans to undergo any activities that would constitute "construction of a new source or process or production unit" for purposes of section 112. As previously discussed, the present Permit does not, on its face, authorize any construction activities at the West Elk Mine. Instead, it expressly acknowledges that the relevant components of the mine were all constructed at different times many years ago. *See* Permit at 3. Any relevant construction that occurred happened at some point in the past, long before the Permit was issued. Thus, it appears beyond question that, a practical matter, during the time period relevant to issuance of this Permit, the facility was and is an *existing* major source of HAP. The Petitioners admit this practical reality on at least three occasions.[36]

The Petitioners' assertion that the Permit authorizes construction of a major source of HAP is even more difficult to follow than their similar assertions regarding VOC emissions, discussed in Claim 1. As the Petitioners acknowledge, the Permit contains no provisions specifically limiting (or "authorizing," to use the Petitioners' word) n-hexane emissions. *See* Petition at 24.

Even if the present Permit could be considered to retroactively "authorize" emissions from a major source of HAP, the Petitioners have not demonstrated that such a permit authorization would, in and of itself, trigger section 112(g) requirements. This is because the Petitioners ignore key provisions in the regulations that define what types of activities constitute "construction" and establish the time frame for when such construction would trigger 112(g) case-by-case MACT requirements.

Construction in the context of section 112(g) is specifically defined to mean: "To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources or [t]o fabricate, erect, or install at any developed site a new process or production unit" that emits or has the potential to emit over the HAP major source thresholds. 40 C.F.R. § 63.41 (definition of "Construct a major source"). The Petitioners briefly acknowledge this definition, but apparently misunderstand the key provision: that construction means "[t]o fabricate, erect, or install" relevant equipment. 40 C.F.R. § 63.41. The Petitioners attempt to argue that the present "Permit, for the first time, authorizes 'the fabricat[ion], erect[ion], or install[ation]'" of the MVBs and MVA system. Petition at 24 (quoting 40 C.F.R. § 63.41 (alterations in Petition)). This reasoning is flawed. Even if the Permit retroactively "authorized" the past MVB and MVA construction activities, this would not make 112(g) applicable to this source. The issuance of a permit authorizing construction (or, as here, acknowledging past construction) is not the same thing as construction itself. Nothing in the statutory or regulatory provisions governing case-by-case MACT requirements under 112(g) indicates that these provisions are

[36] *See* Petition at 24 ("Arch Coal may have illegally built the major source of HAPs in the first place, ..."), 25 ("[C]onstruction of the MVBs and MVA system has occurred."), 26 ("Although the West Elk Mine exists, ...").

triggered by the issuance of a permit.[37] Rather, the relevant statutory and regulatory provisions, by their plain language, clearly state that applicability is triggered when someone actually "construct[s]" a major source of HAP. And again, the definition of "construct a major source" clearly and unambiguously refers to actual, on-site construction activities, and not to the issuance of a permit authorizing such activities. 40 C.F.R. § 63.41. In addition to this definition, the relevant regulations specifically use the phrase "begin *actual* construction" when addressing section 112(g) applicability. 40 C.F.R. § 63.42 (emphasis added). When the EPA promulgated this regulation, the EPA explained: "The EPA intends that the phrase 'begin *actual* construction or reconstruction' have the same meaning as the phrase 'begin actual construction' in 40 CFR 51 and 52 [the NSR and PSD programs], *i.e.* initiation of physical onsite construction activities." 61 Fed. Reg. 68384, 68390 (Dec. 27, 1996) (emphasis added).

Simply put: CDPHE recently issued a title V Permit to the West Elk Mine, which is an existing major source of HAP. But permitting the emissions from or operation of this source is not the same thing as *constructing* the source. To the extent construction occurred in a manner relevant to section 112(g), it occurred in the past.

The fact that construction occurred in the past is important because case-by-case MACT determinations are only required for construction occurring after either "the effective date specified by the permitting authority at the time the permitting authority adopts a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP, or June 29, 1998[,] whichever is earlier." 40 C.F.R. § 63.41 (definition of "Effective date of section 112(g)(2)(B) in a State or local jurisdiction"); *see also* 40 C.F.R. § 63.42(c); 40 C.F.R. § 63.43(a).

The Petitioners neglect to acknowledge this important timing element of the EPA's regulations. More to the point, the Petitioners make no attempt to allege or demonstrate that the West Elk Mine constructed a major source after the relevant date (which appears to be January 30, 1998, but could be no later than June 29, 1998).[38] The Petitioners do not identify any specific construction activities

[37] The Petitioners' view reverses the relationship between section 112(g) applicability and the issuance of permits. Obtaining a permit is not the act that triggers section 112(g) obligations. Instead, obtaining a permit is a requirement if beginning actual construction or reconstruction of a major source of HAP would trigger section 112(g) obligations. Specifically, for sources that are "subject to a case-by-case determination of [MACT]" under CAA § 112(g), the EPA's regulations require that an owner or operator obtain a case-by-case MACT determination prior to beginning actual construction, and such determinations are typically embodied within a permit. 40 C.F.R § 63.43(a), (b), (c); *see* 40 C.F.R. § 63.42(c)(2). However, a requirement to obtain a permit is not a factor in determining whether section 112(g) is applicable in the first instance. In short, when triggered, section 112(g) gives rise to permitting obligations, but not the other way around.

[38] Descriptive text associated with 5 CCR 1001-10, Part E, III.V, the Colorado regulations implementing section 112(g), ascribes a date of November 20, 1997, to this part of the CDPHE regulations. *See* 5 CCR 1001-10, Part E, III, VI.H (Statement of Basis, Specific Statutory Authority and Purpose for Part E). The EPA understands based on correspondence with CDPHE that these regulations had an effective date of January 30, 1998.

occurring since 1998 that would constitute the construction of a major source of HAP.[39] This is the key shortcoming of Claim 2: The Petitioners have not demonstrated that the West Elk Mine undertook construction of a major source of HAP after January 30, 1998. Thus, the Petitioners have failed to demonstrate that construction at the West Elk Mine triggered case-by-case MACT obligations under section 112(g).

In summary, issuance of the Permit did not, in and of itself, cause the West Elk Mine to become subject to case-by-case MACT requirements under section 112(g). This is because issuance of the Permit is not a surrogate for actual construction (or reconstruction) of a major source of HAP. The Petitioners have not otherwise demonstrated that any construction has occurred in a manner that would cause 112(g) to become applicable. Accordingly, the Petitioners have not demonstrated that the Permit lacks any applicable requirements based on section 112(g), and the EPA therefore denies Claim 2. This does not mean that such construction never occurred, and the EPA has no facts to make such a determination on this matter in this Order.

Finally, CDPHE's position does not, as the Petitioners contend, allow sources to illegally construct and operate major sources and then later claim that the sources are not new or reconstructed, thus avoiding compliance with section 112(g) case-by-case MACT requirements. Petition at 24.[40] Section 112(g) obligations are triggered by the timing of actual construction and are ongoing, regardless of whether the source received a MACT determination prior to that construction. So, although the subsequent issuance of the Permit did not, in and of itself, trigger case-by-case MACT obligations (as explained earlier in this response), it also does not in any way allow the West Elk Mine to avoid compliance with any case-by-case MACT obligations that may have become applicable at the time of past construction activities.[41] Thus, although the EPA does not agree with the Petitioner's concerns about CDPHE's position, the EPA does generally agree with the Petitioners' suggestion that "the duty to comply with case-by-case MACT requirements does not dissolve because illegal construction concluded. Rather, case-by-case MACT remains an applicable requirement so long as an operator 'constructs,' meaning that construction has occurred." *Id*. at 25.

[39] Again, the entirety of the Petitioners' construction-based argument depends instead on the theory that issuance of the present Permit equates to construction. But this timing requirement illustrates why the Petitioners' theory equating permit issuance with construction cannot be true. If a hypothetical major source of HAP was actually constructed prior to the cutoff date, it would not be subject to case-by-case MACT requirements. But by the Petitioner's logic, if that same source did not receive a permit associated with the already-constructed source until the present day, then that source—which was properly, legally exempt from case-by-case MACT requirements at the time—would be retroactively subjected to such requirements by the mere issuance of a permit, as opposed to any legitimate construction activity. This hypothetical is presented primarily to show the flaws in the Petitioners' logic, but it could just as well reflect the precise fact pattern relevant to the West Elk Mine. The EPA offers no judgment at the present time about whether and when construction of a major source of HAP occurred at the West Elk Mine.

[40] The Petitioners' concern presupposes that the source was illegally constructed. The EPA understands the Petitioners' reference to illegal construction to mean that the West Elk Mine constructed a major source of HAP without first obtaining a case-by-case MACT determination. As previously explained the Petitioners have not demonstrated that any source at the West Elk Mine was constructed in contravention of then-effective section 112(g) regulations, and the EPA offers no view in this Order as to whether there were in fact changes at this facility that triggered case-by-case MACT obligations under section 112(g).

[41] The Permit contains no permit shield definitively establishing the non-applicability of section 112(g) requirements. *See* 42 U.S.C. § 7661c(f)(2); 40 C.F.R. § 70.6(f)(1)(ii).

C. Claim 3: The Petitioners Claim That "The Title V Permit Fails to Ensure the West Elk Mine Operates in Compliance With the Applicable VOC Emission Limit."

Petition Claim: The Petitioners claim that the Permit must contain additional enforceable operating limits to ensure that the West Elk Mine complies with a limit on VOC emissions. *See* Petition at 26–28.

The Petitioners observe the statutory requirement that title V permits must "include enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements[.]" *Id*. at 26 (quoting 42 U.S.C. § 7661c(a)). Further, relying on the EPA's regulations, the Petitioners assert:

> [W]hile a Title V permit must include "[e]missions limitations and standards," it must also include "those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance." In other words, a Title V permit must not only impose emission limits, but also set forth requirements and limitations on how a source is to operate in order to assure compliance with the applicable limits.

Id. at 26–27 (quoting 40 C.F.R. § 70.6(a)(1)).

Here, the Petitioners observe that the Permit imposes a 465 ton per year limit on VOC emissions from the MVBs and MVA system. *Id*. at 27. The problem, according to the Petitioners, is that the Permit contains no further limitations on the operation of these emission points in order to assure that they operate in compliance with the emission limit. *Id*.

The Petitioners acknowledge permit terms dictating how the facility will calculate emissions from these units. *Id*. at 27–28 (citing Permit Section II, Conditions 1.1, 1.4, 6.1.2, 6.6, 18). Similarly, the Petitioners address CDPHE's RTC, which focused on Permit requirements related to sampling, analysis, and calculating VOC emissions. *Id*. at 28 (citing RTC at 13). However, the Petitioners contend that "calculating emissions does not suffice to ensure that the MVBs [and MVA system] will be operated in a manner that assures compliance with the VOC limit." *Id*. at 27. According to the Petitioners, "While calculating VOC emissions is important, calculating VOC emissions alone does not assure a source operates in compliance with the applicable limit." *Id*. at 28.

The Petitioners also address two operational requirements that the Permit imposes on the MVBs and MVA system, arguing that these particular requirements do not assure that the units "will be operated in such a manner as to assure compliance" with the VOC limit. *Id*. at 27; *see id*. at 27–28 (citing Permit Section II, Conditions 1.5, 6.2).[42]

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

[42] Regarding the MVBs, the Petitioners argue that operational requirements related to closing inactive MVBs (along with recordkeeping requirements concerning which MBVs are inactive or active) do not assure that the active, operating MVBs comply with the VOC emission limit. Regarding the MVA system, the Petitioners argue that a requirement limiting ventilation flow rates, which the Petitioners characterize as a throughput limit, is only relevant to applicable limits on particulate matter, not the VOC emission limit at issue in Claim 3. Petition at 27.

The Permit includes a limit on VOC emissions from the MVBs and MVA system. *See* Permit at 5, 27–28 (Section II, Tables 2 and 7 and Conditions 1.1 and 6.1).[43] The Petitioners claim that the Permit "must not only impose emission limits, but also set forth requirements and limitations on how a source is to operate in order to assure compliance with the applicable limits." Petition at 27. As explained further in the following paragraphs, although there may be situations where it is necessary to use the title V permitting process to create additional operational requirements in order to assure compliance with an applicable requirement, the Petitioners have not demonstrated that such measures are specifically necessary for the West Elk Mine.

The Petitioners' argument is based on language in CAA § 504(a) and 40 C.F.R. § 70.6(a)(1). The EPA recently explored these legal authorities at great length in the *Suncor Plant 2 Order*.[44] In summary, the EPA explained:

> Subject to the qualifications discussed below, EPA generally agrees with the Petitioners that title V permits *can* be used to establish "such other conditions as are necessary to assure compliance with" underlying applicable requirements. ***The key is determining whether such additional measures are necessary***. . . . EPA views the "such other conditions as are necessary" language of CAA § 504(a) to provide a backstop to impose additional permit requirements in extraordinary situations where traditional mechanisms—namely, supplemental monitoring and the enforcement process—prove insufficient to ensure that a source complies with all applicable requirements.

Suncor Plant 2 Order at 14.

Here, the Petitioners present no case-specific facts or reasons for why additional operating limits might be necessary to ensure the West Elk Mine will not violate its VOC emission limit. Absent any fact-specific analysis, it appears that the Petitioners believe that *any time* a title V permit includes an emission limit, it must also impose additional operational limits. The EPA disagrees. As previously explained, the EPA does not interpret CAA § 504(a) and 40 C.F.R. § 70.6(a)(1) in the manner suggested by the Petitioners. The EPA historically has interpreted the statutory and regulatory references to "enforceable emission limitations and standards" and "operational requirements and limitations" to be satisfied so long as title V permits include the limitations and standards established in the underlying applicable requirements themselves, or equivalent provisions. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); 56 Fed. Reg. 21712, 21736 (May 10, 1991); *Suncor Plant 2 Order* at 13. The EPA has further acknowledged that these statutory and regulatory provisions provide the *authority* to impose additional operational requirements in the *extraordinary* situations when this is *necessary* to assure compliance, but they do not establish a *requirement* to do so in all situations. *Suncor Plant 2 Order* at 14. The Petitioners' suggestion that additional operational limits must be universally imposed through

[43] The origin of and authority for this VOC emission limit is not entirely clear, as the Permit is silent in this regard. *See* 40 C.F.R. § 70.6(a)(1)(i). However, neither the Petitioners nor CDHPE contest the fact that this limit—which is included in the Permit without qualification—is a federally enforceable term of the Permit. As such, regardless of the origin of the limit, it is subject to the compliance assurance requirements of title V. *See In the Matter of ExxonMobil Fuels & Lubricant Co., Baton Rouge Refinery, Reforming Complex & Utilities Unit*, Order on Petition Nos. VI–2020–4, VI–2020–6, VI–2021–1, & VI–2021–2 at 16 & 16 n.26 (Mar. 18, 2022).

[44] The EPA's discussion of these legal authorities in *Suncor Plant 2* is relevant here, notwithstanding the fact that *Suncor Plant 2* order involved materially different facts, which led the EPA to a different conclusion in that case.

title V permits would fundamentally redefine the title V permitting program in a way that EPA believes would be inconsistent with Congress's design of, and intent for, the title V program.[45]

As the EPA has previously explained, requirements to test, monitor, keep records of, and calculate emissions under CAA § 504(c) are the primary means by which title V permits assure compliance with underlying emission limits and other standards. *See, e.g.*, *Suncor Plant 2 Order* at 15. Here, to demonstrate compliance with the VOC emission limit at issue, the Permit requires the West Elk Mine to calculate rolling 12-month emissions based on data obtained from the monitoring and sampling of flow and VOC concentrations, measured twice a month. *See* Permit at 5, 28, 99, 101 (Section II, Conditions 1.1.1, 1.1.2, 6.1.2, 6.1.3, 18.1, 18.2, 18.3). The Petitioners twice suggest—without any explanation—that requirements to calculate emissions,[46] without further operating restrictions, are insufficient to ensure that the West Elk Mine operates in compliance with the applicable VOC limit. Petition at 27, 28. Again, the EPA disagrees. In fact, the EPA rejected an essentially identical argument in the *Suncor Plant 2 Order*, stating:

> As a general matter, to the extent the Petitioners assert that such additional measures—that is, measures beyond the information-gathering requirements imposed under CAA § 504(c)—must always be included in a title V permit in order to assure compliance, EPA does not agree. . . . Based on decades of experience implementing and overseeing the title V program, EPA expects that most compliance assurance questions will continue to be solved using monitoring [and related emission quantification approaches] under CAA § 504(c), and it should rarely be necessary to impose additional requirements, such as operational requirements, under CAA § 504(a).

Suncor Plant 2 Order at 15. Again, the Petitioners have presented no information to demonstrate why the Permit's overall approach is insufficient here.[47]

Not only do the Petitioners fail to demonstrate that the existing permit terms are inadequate to assure compliance, but they also provide no examples or suggestions of any operational requirements that

[45] *See, e.g.*, S. Rep. No. 101–228 at 347 (Dec. 20, 1989), *reprinted in* 5 Legislative History of the Clean Air Act Amendments of 1990 at 8687 (1998); *cf*. *Env't Integrity Project v. EPA,* 960 F. 3d 236, 250 (5th Cir. 2020) (rejecting an expansive view of the residual reference in CAA § 504(a) to "other conditions as are necessary to assure compliance with applicable requirements").

[46] The Petitioners' suggestion that the Permit merely requires the source to "calculate" emissions paints an incomplete picture of the compliance assurance regime associated with this VOC limit. *See* Petition at 27, 28. As the Petitioners elsewhere recognize, the Permit contains many other conditions that mandate how the West Elk Mine is to demonstrate compliance with this VOC limit. The Permit specifies the basic requirement to conduct sampling, the emission points sampled (active MVBs and the two MVA shafts), the frequency of sampling (generally twice a month), the parameters that must be sampled (VOC concentrations and flow rates), and the formulas or equations used to convert sampling results into emissions information on a timescale relevant to the VOC emission limit. Permit at 99 (Section II, Conditions 18.1, 18.2).

[47] Claim 4 of the Petition includes various challenges to the Permit's compliance demonstration methodology, including the emission calculation regime briefly mentioned in Claim 3. However, those Claim 4 arguments are presented in order to show that the existing permit requirements are insufficient to satisfy CAA § 504(c) in their own right. The Petitioners do not argue that the alleged deficiencies addressed in Claim 4 provide a reason for imposing additional operating requirements under CAA § 504(a) in Claim 3. Nor should they. Provided any deficiencies with the Permit's compliance assurance regime can be addressed through revisions to the specific monitoring and calculation requirements addressed in Claim 4, those types of requirements should generally be sufficient to assure compliance with the VOC emission limit at issue. Thus, the EPA does not expect it would be necessary to impose additional operational limits, as requested in Claim 3.

they consider necessary to assure compliance with the VOC limit.[48] Further, the Petitioners fail to address the portion of CDPHE's RTC explaining that "that MVBs exist to vent the mine for safety purposes," and that the Permit's existing compliance demonstration requirements (as opposed to the requested operational restrictions) provide necessary flexibility to "allow[] the source to adjust operations of the MVBs to maintain safe work practices." RTC at 13; *see* 40 C.F.R. § 70.12(a)(2)(vi). Overall, the Petitioners present no fact-specific information demonstrating that CDPHE must take the extraordinary step of including in the Permit additional operating limits in order to assure compliance with the VOC emission limit at issue. Thus, the EPA denies Claim 3.

D. Claim 4: The Petitioners Claim That "The Title V Permit Fails to Require Sufficient Periodic Monitoring of VOC Emissions."

Claim 4 includes three subclaims, each alleging distinct reasons for why the Permit fails to include sufficient periodic monitoring to assure compliance with the 465 tons per year VOC limit on the MVBs and MVA system. *See* Petition at 28–34. Each of the three specific subclaims are addressed in turn in the subsections that follow.

As relevant to all subclaims, the Petitioners state that a title V permit must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." *Id*. at 29 (quoting 42 U.S.C. § 7661c(c);[49] citing 40 C.F.R. § 70.6(c)(1)). Further, the Petitioners state that a title V permit must include "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." *Id*. (quoting 40 C.F.R. § 70.6(a)(3)(i)(B)).[50]

The Petitioners' "primary concern[] is that provisions of [Permit] Section II, Condition 18 are vague and unenforceable as a practical matter such that it cannot be relied upon to yield reliable data that are representative of Arch Coal's compliance with the VOC limit." *Id*.

Subclaim 4.1: The Petitioners Claim That "'Active' is not Defined in the Context of Active MVBs."

Petition Claim: In the first subclaim within Claim 4, the Petitioners note that the Permit requires flow monitoring and sampling of VOC emissions from "active" MVBs. Petition at 29 (citing Permit, Section II, Conditions 18.1 and 18.2). The Petitioners claim that "active" is not defined and that its meaning is not clear. *Id*.

The Petitioners present two hypotheticals to illustrate the lack of clarity in this term. First, the Petitioners contend that "'active' could refer to an emitting MVB, but it could also refer to a non-emitting MVB that is part of an active, multi-well venting operation." *Id*. at 30. Further, the Petitioners

[48] The Petitioners briefly discuss existing operational limits in the Permit, arguing that those requirements are not relevant to assuring compliance with the specific VOC limit at issue. *See* Petition at 27. But because CDPHE does not rely on those other limits as a means of assuring compliance wth the VOC limit at issue, and because the Petitioners have not demonstrated that any operating limits are necessary to assure compliance with that VOC limit, the EPA need not address whether those other operating limits assure compliance with the VOC emission limit.

[49] The Petition attributes the quoted language to 42 U.S.C. § 7661c(b); this appears to be a typographical error.

[50] The Petition attributes the quoted language to 40 C.F.R. § 70.6(a)(3)(i)(A); this appears to be a typographical error.

assert that "it is not clear if Arch Coal could temporarily shut off gas flow at wells and claim they are not active in order to avoid sampling and testing for VOC emissions altogether." *Id*.

The Petitioners address CDPHE's assertion that "Section II, Condition 1.5 specifies the criteria for what is considered an active and inactive MVB." *Id*. (quoting RTC at 13). The Petitioners claim that this permit term does not specify any criteria for what is considered an active or an inactive MVB. *Id*. Instead, the Petitioners observe this permit term "refers to 'an MVB that is not in operation' and 'inactive MVBs which are not plugged and abandoned,' but does not specify the criteria for what is considered an active or inactive MVB." *Id*.

In summary, the Petitioners claim that the ambiguity in the term "active" renders "Condition 18 . . . unenforceable as it relates to flow measurement and VOC sampling and testing for the MVBs," and accordingly that the Permit does not contain sufficient periodic monitoring. *Id*.

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

Title V permits must set forth monitoring and related requirements that are sufficient to assure compliance with all applicable requirements and permit terms. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1). In order to assure compliance with the Permit's VOC emission limit, Permit Condition 18 requires flow monitoring and sampling of VOC emissions from "active" MVBs. Permit at 99 (Section II, Conditions 18.1, 18.2). Determining which MVBs are "active" is therefore a critical element of the Permit's compliance assurance methodology. Making this determination is not as self-evident as it might seem. Given the novelty of the situation[51] and the different variables that might impact which MVBs are considered "active" at any given point in time (some of which are discussed by the Petitioners), it is important that the Permit and permit record clearly convey the intended meaning of the term "active" in this context.

CDPHE's only response to comments questioning the meaning of "active" is that "Condition 1.5 specifies the criteria for what is considered an active and inactive MVB." RTC at 13. However, as the Petitioners correctly state, this permit term does not actually specify criteria to distinguish between active and inactive MVBs.

Permit Condition 1.5 provides:

> 1.5 At all times during which an MVB is not in operation, it will be equipped with a closed and locked valve to prevent the release of air pollutants, with the exception of times during which a MVB with a locked valve would present unsafe mine conditions, or for seasonal considerations which preclude surface access to the MVB.
>
> 1.5.1 The Source must maintain records of which MVBs are active and which are inactive, and which MVBs have been plugged and abandoned.

[51] Regardless of whether air emissions from MVBs at underground coal mines should be regulated under various CAA programs, the EPA's understanding is that these emission points have historically not been regulated by most permitting authorities. Thus, the concept of an active or inactive MVB is not necessarily self-evident or widely understood, absent further definition.

> 1.5.2 For inactive MVBs which are not plugged and abandoned, the Source must maintain records which contain the reason why the MVB is not plugged and abandoned, and an estimated date by which the MVB will be plugged and abandoned. In the event an estimated date needs revision, the Source shall indicate the reason for the revision, and provide a new estimated date by which the MVB will be plugged and abandoned.

Permit at 6 (Section II, Condition 1.5).

This permit term uses a variety of labels, including "in operation," "active," and "inactive," as well as various descriptive phrases and requirements, such as "equipped with a closed and locked valve" and "plugged and abandoned." However, neither the Permit nor permit record explains the how these labels and phrases relate to the concept of active and inactive MVBs.

For example, it is unclear whether "in operation" was intended to be synonymous with "active," and "not in operation" with "inactive." This seems like a plausible intention.[52] However, even if this connection was more explicit in the Permit, the problem identified by the Petitioners still remains: what criteria would one use to determine whether something is in operation—*i.e.*, active? The permit requires that *most* MVBs that are not in operation be equipped with a closed and locked valve. But the Permit also allows that *some* MVBs that are not in operation will have no such valve (when precluded due to safety or seasonal considerations). So, the presence or absence of closed and locked valves does not appear to be a reliable criterion for determining whether an MVB is in operation. Thus, even if one assumes that "in operation" was intended to be equivalent to "active," the presence or absence of a closed and locked valve does not appear to serve as a reliable criterion for determining which MVBs are active or inactive.

Additionally, under this permit term, "inactive" MVBs include both (i) inactive MVBs that are plugged and abandoned and (ii) inactive MVBs that are not plugged and abandoned. So, the presence or absence of plugging or abandonment does not appear to be a reliable criterion for determining which MVBs are active or inactive.

Overall, the Petitioners have demonstrated that the Permit's ambiguity regarding which MVBs are "active" and must be sampled, compounded by the lack of explanation in CDPHE's permit record, renders Condition 18 insufficient to assure compliance with the VOC emission limit. The EPA therefore grants Subclaim 4.1. 42 U.S.C. § 7661c(c).

Direction to CDPHE: CDPHE must revise the Permit to ensure that the Permit contains enough detail to determine which MVBs must be sampled pursuant to Condition 18. For example, CDPHE could update Condition 1.5 to more clearly identify the criteria by which one would determine which MVBs are

[52] Presumably, if an MVB is not in operation and is equipped with a closed and locked valve, it would be considered inactive, and the facility would not be expected to open it up solely for purposes of sampling. After all, the purpose of the biweekly sampling is to figure out the total emissions from each MVB. If the MVB has no emissions because it is equipped with a closed and locked valve, it would make little sense to open it up, take a sample, and then extrapolate the emission results from that sample to an entire two-week period.

active or inactive (which, according to CDPHE's RTC, was its intent).[53] CDPHE may also wish to provide further clarification in the permit record on this point.

Subclaim 4.2: The Petitioners Claim That "The Permit Does Not Set Forth Any Specific VOC Monitoring Requirements."

Petition Claim: In the second subclaim within Claim 4, the Petitioners claim that the Permit "fails to set forth any specific methodology for sampling and testing VOC emissions from the MVBs and MVA system." Petition at 30.

The Petitioners focus on the Permit's requirement to sample and test VOC emissions using a "Division-approved sampling and analysis plan." *Id*. (quoting Permit Section II, Condition 18.2). However, because this plan is not set forth in the Permit, the Petitioners claim that it is not clear what the plan requires, where it can be obtained, or "whether adherence to this plan will be sufficient to yield reliable data from the relevant time period that are representative of Arch Coal's compliance." *Id*.

The Petitioners assert that the sampling and analysis plan must be included in the Permit. *See id*. at 31. The Petitioners challenge CDPHE's position that "Commenter submits no basis for the position that the sampling plan itself needs to be incorporated into the permit. That would be inconsistent with the Division's understanding of EPA and other states' approach to these types of issues." *Id*. (quoting RTC at 14). The Petitioners assert: "The failure to include the sampling and analysis plan, or at least specific terms and conditions of the plan sufficient to demonstrate clear and specific requirements, in the Title V Permit means the Division has failed to 'set forth' monitoring sufficient to ensure compliance." *Id*. (quoting 42 U.S.C. § 7661c(c);[54] citing 40 C.F.R. § 70.6(c)(1)). Further, the Petitioners argue:

> The EPA has consistently held that where a plan, like the referenced sampling and analysis plan in Condition 18.2, is necessary to assure compliance with applicable requirements, it must be included in the Title V Permit. *See e.g., In the Matter of Oak Grove Management Company*, Order on Petition No. VI-2017-12 at 10 (Oct. 15, 2021) (holding that compliance "Maintenance, Startup, and Shutdown Plan" was necessary to assure compliance with applicable emission limits and therefore was required to be incorporated into the Title V permit). Here, the sampling and analysis plan is the only means of demonstrating compliance with the applicable VOC limit in the Title V Permit.

Petition at 31.

The Petitioners also discuss a portion of CDPHE's RTC that addressed the state's requirements for sampling and analysis plans, as contained in a Compliance Test Manual available on CDPHE's website. *See id*. at 30–31 (citing RTC at 14). The Petitioners challenge any reliance on this Compliance Test Manual because "this document sets forth no requirements, criteria, or standards specific to the West Elk Mine and the VOC sampling and analysis plan," but instead contains "a general set of guidelines and practices for sources to follow when conducting compliance tests." *Id*. at 31.

[53] In updating the Permit, CDHPE could consider suggestions provided by the Mountain Coal Company to CDPHE in response to public comments addressing this issue. The EPA understands that this document was part of the administrative record before CDPHE as it developed the Permit.

[54] The Petition attributes the quoted language to 42 U.S.C. § 7661c(b); this appears to be a typographical error.

Additionally, the Petitioners express concern with a permit term that allows for revisions to the plan. The Petitioners observe that the Permit allows Arch Coal to modify the sampling and analysis plan "for any reason" and to submit the revised plan to CDPHE for approval at least 30 days prior to the next required test. *Id*. at 30 (citing Permit, Section II, Condition 18.2.3.1). The Petitioners express concern that the "for any reason" language makes CDPHE approval "all-but-guaranteed," and that this renders Condition 18 "unenforceable." *Id*. at 30, 31. The Petitioners also assert that allowing changes to the sampling plan without requiring a modification to the Permit runs afoul of title V requirements. *Id*. (citing 40 C.F.R. § 70.7(e)).

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

The Permit's compliance demonstration provisions repeatedly refer to a "sampling and analysis plan." Specifically, the Permit contains the following references to this plan:

> Flow Monitoring: Flow rates of the deer creek and sly gulch shafts (MVA) and each active MVB must be monitored in accordance with the Division-approved sampling and analysis plan. . . .
> ***
> Sampling and Analysis: At least twice per calendar month, the Deer Creek and Sylvester Gulch shafts (MVA) and each active MVB must be sampled and tested for VOC and HAP emissions using the Division-approved sampling and analysis plan, which includes the specific list of HAP analytes. The compliance test must be conducted in accordance with the most recent version of the APCD Compliance Test Manual (https://cdphe.colorado.gov/compliance-and-enforcement), as applicable and appropriate, including deadlines for preparation and submittal of the protocol for Division review and approval and for submittal of the test report. All compliance analyses must be approved by the Division prior to conducting the test.
> The Deer Creek and Sylvester Gulch sampling and analysis results shall be summed and the total will be considered MVA (AIRS 019) emissions. Each active MVB sampling and analysis result shall be summed and the total will be considered MVB (AIRS 026) emissions. MVA and MVB emissions shall be summed to demonstrate compliance with the combined VOC limit, and for determining the sampling schedule. Sampling and analysis results shall be converted to units of tons of each individual pollutant per day, using the following formulas, or similar, as appropriate; total VOC emissions shall be the sum of all individual VOCs; total HAP emissions shall be the sum of all individual HAP: . . .
> ***
> At the time of permit issuance, the Source has a Division-approved sampling and analysis plan. If the Source elects to modify the sampling and analysis plan for any reason, a new plan shall be submitted for Division approval at least thirty (30) calendar days prior to the subsequent test required under this condition. An additional sampling and analysis plan does not need to be submitted unless there have been changes.

Permit at 99, 100 (Section II, Conditions 18.1. 18.2, 18.2.3.1).

The Petitioners assert that the Permit itself must "include the sampling and analysis plan, or at least specific terms and conditions of the plan sufficient to demonstrate clear and specific requirements . . . ." Petition at 30. CDPHE, by contrast, asserts that the sampling and analysis plan need not be incorporated into the Permit: "That would be inconsistent with the Division's understanding of EPA and other states' approach to these types of issues." RTC at 14.

As an initial matter, the Petitioners are correct that title V permits must "set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c). The statute and regulations identify specific types of compliance assurance provisions that must be included in a permit—such as "monitoring and analysis procedures or test methods," or "terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement." 40 C.F.R. § 70.6(a)(3)(i)(A), (B); *see* 42 U.S.C. § 7661c(a), (c). However, these legal authorities do not expressly require the inclusion of plans such as the one at issue here. Thus, the relevant question is whether additional information from the sampling and analysis plan is necessary to assure compliance with the VOC emission limit; that is, whether the current permit requirements—without the information contained in the plan—are "sufficient to assure compliance." 40 C.F.R. § 70.6(c)(1).

Relatedly, the EPA has addressed numerous petition claims requesting that different types of detailed operational plans[55] be included in (or incorporated into[56]) a title V permit and available for the public to review. For a summary of the general principles underlying this issue, see *In the Matter of Drummond Co., Inc., ABC Coke Plant*, Order on Petition No. IV-2019-7 at 13–15 (June 30, 2021) (*ABC Coke Order*). As relevant here, and as the Petitioners acknowledge, "only plans (or portions of plans) that are necessary to impose an applicable requirement or assure compliance with an applicable requirement need be included (or incorporated) in a title V permit or included with a permit application and made available for public review." *ABC Coke Order* at 13 (citing 42 U.S.C. § 7661c(a), (c); 40 C.F.R. §§ 70.5(c), 70.6(a)(1), 70.6(c)(1), and several petition orders); *see* Petition at 31. As with essentially all issues concerning which requirements are necessary or sufficient to assure compliance, determining whether a particular plan (or specific details from a plan) must be included in a permit is a fact-specific question.

Here, it is evident from the terms of the Permit that the West Elk Mine's sampling and analysis plan is closely related to assuring compliance with the VOC emission limit at issue. After all, when conducting the sampling required by the Permit, the West Elk Mine must follow the procedures in this plan, and the data resulting from this sampling are then used to calculate emissions and demonstrate compliance with the VOC emission limit according to the equations specified in the Permit. *See* Permit at 99–100.[57]

[55] These plans take many different forms and serve many different functions. In general, these plans usually contain details beyond those contained in underlying applicable requirements or permit terms, and are usually developed by the source and submitted to the permitting authority for approval.

[56] Certain required permit elements may be incorporated by reference, instead of directly included in, title V permits. *See, e.g.*, *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program,* 36–41 (Mar. 5, 1996).

[57] The Petitioners argue that "the sampling and analysis plan is the only means of demonstrating compliance with the applicable VOC limit in the Title V Permit." Petition at 31. However, as the Petitioners elsewhere recognize, the Permit contains many other related conditions that mandate how the West Elk Mine is to demonstrate compliance with this VOC limit. The Permit specifies the basic requirement to conduct sampling, the emission points sampled (active MVBs and the two MVA shafts), the frequency of sampling (generally twice a month), the parameters that must be sampled (VOC

From the EPA's review of the sampling and analysis plan,[58] and from CDPHE's description of this plan in the Permit and in its RTC, it appears that the plan is most similar to a performance test protocol or test plan.[59] As a general matter, the EPA agrees with CDPHE's suggestion that this type of plan is not typically included in title V permits. *See* RTC at 14. Test protocols or test plans are a common element of compliance assurance requirements across the nation, as they are often required alongside stack testing requirements. *See, e.g.*, 40 C.F.R. § 63.7(c)(2). These plans typically contain details beyond those which are *necessary* to assure compliance. Thus, normally, the EPA would not expect it necessary to include (or directly incorporate by reference) such a plan in a title V permit, provided the permit otherwise contains the requirements sufficient to assure compliance. *See, e.g.*, *In the Matter of Kentucky Syngas, LLC*, Order on Petition No. IV-2010-9 at 13 (June 22, 2012).

However, there may be situations in which certain details found only in such a plan might need to be included in the Permit itself. Here, the Petitioners assert that the Permit "fails to set forth any specific methodology for sampling and testing VOC emissions from the MVBs and MVA system." Petition at 30. The Petitioners are correct that the Permit does not identify certain critical details about the methodology used to sample emissions and demonstrate compliance with the VOC emission limit. Specifically, the Permit lacks any reference to the specific test method used to sample emissions. This detail is included only in the sampling and analysis plan (alongside various other details that the EPA would not necessarily expect to see in the Permit): the West Elk Mine will use Method TO-14A to demonstrate compliance.[60] Overall, although EPA does not necessarily agree that the entire sampling and analysis plan needs to be included in (or incorporated by reference into) the Permit, the Permit must include, at a minimum, more information about the test method used to demonstrate compliance. 40 C.F.R. § 70.6(a)(3)(i)(B); *see* 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(a)(3)(i)(A). Therefore, the EPA grants Subclaim 4.2.

Direction to CDPHE: CDPHE must revise the Permit to include all requirements necessary to assure compliance with the VOC emission limit at issue. At minimum, the Permit must specify the test method used to demonstrate compliance. The EPA does not expect it will be necessary to include other details

concentrations and flow rates), and the formulas or equations used to convert sampling results into emissions information on a timescale relevant to the VOC emission limit. Permit at 99 (Section II, Conditions 18.1, 18.2). The sampling and analysis plan contains additional details regarding these requirements for demonstrating compliance with the VOC emission limit. Thus, the key question is whether it is necessary for the Permit itself to include any of those additional details, beyond what the Permit already specifies.

[58] The Petitioners are incorrect to suggest the sampling and analysis plan was not publicly available. *See* Petition at 30, 31. The public notice announcing the Draft Permit pointed the public to the following CDPHE website for copies of relevant files associated with the Draft Permit: *https://cdphe.colorado.gov/apens-and-air-permits/air-permit-public-notices*. That website included a folder of files relevant to the Draft Permit, and the sampling and analysis plan was among those files. After the public comment period concluded, these documents were removed from CDPHE's website. However, the public may still access the plan by requesting it from CDPHE.

[59] This characterization is supported by the Permit's and the RTC's reference to the statewide Compliance Test Manual, which establishes basic requirements and guidelines for conducting performance tests. *See* Permit at 99 (Section II, Condition 18.2); RTC at 14. This view of the sampling and analysis plan is also supported by the requirement for the source to submit any changes to such plan at least 30 calendar days prior to the next performance test, which is a typical requirement for performance test protocols or plans. *See* Permit at 100 (Section II, Condition 18.2.3.1).

[60] Sampling and Analysis Plan for Volatile Organic Compounds (VOCs) at West Elk Mine at 5 (Jan. 30, 2023) (citing EPA, Compendium Method TO-14A, Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Specially Prepared Canisters With Subsequent Analysis by Gas Chromatography (Jan. 1999)).

from the sampling and analysis plan in the Permit. However, to the extent CDPHE determines that additional details are necessary to assure compliance, CDPHE could incorporate the plan by reference into the Permit. In so doing, CDPHE should consider the EPA's guidance on how to effectively incorporate requirements by reference into title V permits. *See, e.g.*, *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program,* 36–41 (Mar. 5, 1996).

Subclaim 4.3: The Petitioners Claim That "The Permit Fails to Require Sufficiently Frequent Testing of VOC Emissions."

Petition Claim: In the third subclaim within Claim 4, the Petitioners claim that the Permit's requirement to sample VOC emissions twice a month is not frequent enough to assure compliance with the VOC emission limit on the MVBs and MVA system. *See* Petition at 31–34.

The Petitioners observe that the EPA has held that "[d]etermining whether monitoring is adequate in a particular circumstance is generally a context-specific determination made on a case-by-case basis." *Id*. at 33 (quoting *In the Matter of Cove Point LNG, L.P. Cove Point LNG Terminal*, Order on Petition No. III-2022-14 at 15 (March 8, 2023)). Further, the Petitioners repeat five factors (supplied by the EPA) relevant to determining appropriate monitoring:

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

Id. (quoting *In the Matter of CITGO Refining and Chemicals Co., L.P., West Plant*, Order on Petition No. VI-2007-01 at 7–8 (May 28, 2009) (*CITGO Order*)). The Petitioners criticize CDPHE for not assessing factors other than the variability of emissions. *Id*. at 34. The Petitioners briefly reference the fact there are no add-on controls here, that there is a relative dearth of information regarding VOC emissions from the MVBs and MVA system, and that there are no other facilities currently monitoring similar emissions from similar units. *Id*. The Petitioners conclude that more frequent VOC monitoring is necessary given the unique nature of the situation. *Id*.

The bulk of the Petitioners' argument focuses on variability of emissions. The Petitioners reproduce the following statements from the permit record addressing the variability of emissions from the mine: "There is too much inherent variability both between coal seams, and within the individual seams themselves to use coal production as a proxy for VOC emissions"; "Based on the Division's data and analysis, the VOC emissions are unique to an individual coal seam with high variability even within a coal seam"; "Mine VOC emissions are not steady state and likely a substantial fraction of the emissions occur during intermittent events"; "As sampling over the last 14 months have shown, gaseous emissions from the mine ventilation systems are variable depending on the geological conditions overlying the coal seam that are encountered as the longwall equipment mines the coal seam and the overlying rock breaks forming a rubblized zone." *Id*. at 32 (quoting TRD at 4–5, RTC at 5; RTC at 6; Petition Ex. 3 at PDF p. 25).

The Petitioners claim that, in light of this variability, "It is not clear how twice monthly testing will yield reliable data to assure continuous compliance with the applicable VOC limit." *Id*. at 32. The Petitioners question CDPHE's RTC, which justified this frequency as follows: "The established sampling/testing interval is based on test data from the past several years. The Division considers the sampling interval sufficiently frequent to address potential changes in VOC concentration[.]" *Id*. (quoting RTC at 14). The Petitioners argue: "It is not clear what 'test data' the Division is referring to and how this 'test data' demonstrates that twice monthly testing is sufficiently frequent." *Id*.[61]

The Petitioners challenge two other permit terms related to the VOC sampling frequency. First, the Petitioners address Condition 18.2.2.2, which allows for testing on a monthly basis in the event that emissions are 50 percent below the applicable VOC limit. *Id*. at 32. The Petitioners argue that, given the inherent variability in VOC emissions (*e.g.*, emissions may be low one month, but higher another month) it is "completely unsupported" for the Permit to allow less frequent reporting of VOC emissions. *Id*. at 32–33.

Second, the Petitioners address Condition 18.2.2.1, which requires immediate sampling after a "hydrocarbon event." *Id*. at 33. The Petitioners argue that it is not clear that variability of VOC emissions is tied solely to the occurrence of a hydrocarbon event. *Id*. To the extent this permit term is intended to address the variability in VOC emissions during this type of intermittent event, the Petitioners conclude that it is necessary for the Permit to impose "a rigorous system" of monitoring to detect when a hydrocarbon event occurs. *Id*. The Petitioners suggest this is necessary because such events "are largely unpredictable and occur randomly during mining." *Id*. (quoting RTC at 6). The Petitioners also suggest that the requirement for "immediate" sampling is undermined by the qualifier "as soon as is reasonably practicable with respect to mine and worker safety." *Id*. The Petitioners conclude that any such non-immediate sampling is not sufficiently frequent. *Id*.

EPA Response: For the following reasons, the EPA grants in part and denies in part the Petitioners' request for an objection on this subclaim.

In order to demonstrate compliance with the VOC emission limit at issue, the Permit requires the West Elk Mine to sample the MVA shafts and each active MVB "[a]t least twice per calendar month." Permit at 99 (Section II, Condition 18.2).

The Petitioners argue that this sampling requirement is not frequent enough. As the Petitioners correctly observe, determining whether monitoring is adequate in a particular circumstance is generally a context-specific determination made on a case-by-case basis. *E.g.*, *CITGO Order* at 7. The

[61] The Petitioners also question the relevance of other aspects of CDPHE's RTC, including the state's suggestion that this testing will produce a substantial amount of data that could be used in the future. *Id*. at 32 (citing RTC at 14).

EPA has identified various factors that are relevant to this inquiry. *See, e.g.*, *id*. at 7–8.[62] Here, the factor most relevant to determining the necessary frequency of sampling appears to be variability. As the Petitioners recount, the permit record is replete with references to the variability of VOC emissions from the West Elk Mine, with VOC emissions varying widely both between different coal seams and within individual coal seams. *See, e.g.*, Petition at 32; TRD at 4–5, 13; RTC at 5–7. Acknowledging this variability, CDPHE takes the position that the Permit adequately accounts for it, stating:

> The permit includes sampling and testing at an appropriate interval. The established sampling/testing interval is based on test data from the past several years. The Division considers the sampling interval sufficiently frequent to address potential changes in VOC concentration as discussed earlier in this document. The Division believes that this sampling interval will produce a substantial amount of data that can be used in reliance in the future.

RTC at 14. This justification, while plausible at an abstract level, is incomplete. As the Petitioners state, "It is not clear what 'test data' the Division is referring to and how this 'test data' demonstrates that twice monthly testing is sufficiently frequent." Petition at 32. For example, if the test data indicate a longer-term pattern of variability (*e.g.*, varying over the course of months, as opposed to weeks), then CDPHE's conclusion might be well justified. However, if the test data indicate a shorter-term pattern of variability, twice-monthly sampling might not capture such variability with sufficient accuracy to reasonably estimate monthly emissions. Overall, given the acknowledged variability in VOC emissions from the West Elk Mine, and because CDPHE's RTC does not provide further qualitative or quantitative explanation of how the past test data relates to the time scale of emissions variability at the mine, the EPA cannot determine whether the Permit's twice monthly sampling frequency is sufficient to assure compliance with the rolling twelve-month VOC emission limit. Thus, the EPA grants this part of Subclaim 4.3. 40 C.F.R. § 70.8(c)(3)(ii).

The Permit provides two alternatives to the default twice-monthly sampling frequency. The Petitioners' challenges to these two other permit terms are less persuasive.

First, the Permit provides that if, "after twelve (12) months of sampling and testing under the twice monthly requirement," the "sampling and analysis results show annualized emissions below 50% of the annual VOC emission limit, subsequent sampling and analysis shall be required no later than 30 days from the date of the most recent sampling and analysis." Permit at 100 (Section II, Condition 18.2.2.2).

The Petitioners appear to assert that any reduction in sampling frequency would be problematic. The only reason supplied by the Petitioners is the general nature of the facility's variable emissions. *See*

[62] No public comments specifically addressed any of the five factors from the *CITGO Order* other than variability. This has two consequences insofar as the Petition is concerned. First, CDPHE cannot be faulted for not specifically addressing each of these five factors. *See* Petition at 34. Although the EPA encourages permitting authorities to consider these factors when determining the monitoring necessary to assure compliance, the regulations contain no requirement for states to specifically address these factors, and because no commenters raised these factors, CDPHE was not obligated to address these factors when responding to comments. Second, any Petition arguments based on these factors (other than variability) were not preserved and are barred by CAA § 505(b)(2). In any case, even if the Petitioners' arguments had been preserved, or if the EPA were to consider them under the discretionary lens of reopening for cause under CAA § 505(e) and 40 C.F.R. § 70.7(g) and (f), the Petitioners one-sentence discussion of each factor would present no additional basis to object to or reopen the Permit.

Petition at 32–33. But the Petitioners disregard a factor that, in this instance, is potentially more important than variability: the likelihood of violation. *See, e.g.*, *CITGO Order* at 7. If the facility is unlikely to violate the VOC emission limit (*e.g.*, as evidenced by emissions below 50 percent of the limit), then a reduced sampling frequency might be appropriate. That is, if variability is not likely to impact compliance (because emissions are much lower than the applicable limit), then the mere existence of variability would not necessarily provide a reason to maintain an unnecessarily frequent monitoring regime. Additionally, and relatedly, the Petitioners neglect to acknowledge multiple safeguards in the Permit (discussed in CDPHE's permit record) that potentially account for emissions variability in the circumstances relevant to this permit term. Specifically, the facility can take advantage of this provision only after an entire year's data show emissions below 50 percent of the limit, and subsequently, if any single month's sampling shows annualized emissions above 50 percent of the annual limit, then twice monthly sampling must resume. Permit at 100 (Section II, Conditions 18.2.2.2, 18.2.2.3); *see* RTC at 14. The Petitioners have not addressed these permit terms or CDPHE's RTC, much less demonstrated that they are inadequate to account for any remaining concerns related to variability in emissions. *See* 40 C.F.R. § 70.12(a)(2)(vi).[63] Thus, the EPA denies this part of Subclaim 4.3.

Second, the Permit provides: "In the event that a hydrocarbon event occurs (as defined in the Source's MSHA-approved Mine Ventilation Plan: when liquid hydrocarbons are observed on the longwall face or other areas other than the longwall face), the Source will immediately initiate sampling and analysis" at all relevant locations, with such sampling beginning "as soon as is reasonably practicable with respect to mine and worker safety" and repeated again between seven and 14 days. Permit at 100 (Section II, Condition 18.2.2.1).

The Petitioners' challenges to this permit term were not raised in any public comments. The Petitioners have not alleged (much less demonstrated) that it was impracticable to do so or that these issues are after-arising. Thus, the Petitioners' allegations concerning this permit term were not preserved and are barred by CAA § 505(b)(2).[64] Accordingly, the EPA denies the remainder of Subclaim 4.3.

Direction to CDPHE: CDPHE must amend the permit record or Permit as necessary to ensure that the Permit contains sufficiently frequent sampling requirements to assure compliance with the rolling 12-month VOC emission limit at issue. At minimum, CDPHE must update the permit record to justify the Permit's twice-monthly sampling requirement. The Permit record should provide more qualitative or, ideally, quantitative information about how prior stack test data relates to the time scale of VOC emissions variability at the West Elk Mine. Given that much of the variability in VOC emissions appears related to mine progression, CDPHE could also provide more information explaining the relationship between the time scales of mine progression and the resulting variability in emissions (to the extent this relationship is known). CDPHE may also be able to rely on other potentially relevant factors (*e.g.*, the factors described in the *CITGO Order*) to support the Permit's current sampling frequency.

[63] *See also supra* notes 8 and 9 and accompanying text.

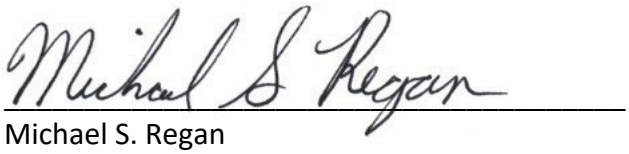
[64] However, even if these issues were properly raised in a title V petition, or considered by the EPA in the discretionary context of reopening for cause under CAA § 505(e) and 40 C.F.R. § 70.7(g) and (f), the Petitioners' discussion on this point would not provide any additional basis for the EPA to object to or reopen the Permit. The Petitioners' limited discussion on this point is insufficient to demonstrate that a "rigorous system of detecting" hydrocarbon events is necessary. Petition at 33. Moreover, the Petitioners' concerns with the Permit's provision for sampling "as soon as is reasonably practicable with respect to mine and worker safety" are difficult to understand. To the extent the Petitioners are suggesting that the Permit must instead require literally immediate sampling, even if it would result in a safety hazard to workers, the EPA does not agree.

If the data do not support twice-monthly sampling of VOC emissions, then CDPHE must revise the Permit to specify either an increased sampling frequency or some other appropriate means of assuring compliance with the rolling 12-month VOC emission limit. Additionally, if CDPHE decides to revise the default twice-monthly sampling frequency, then it may also be necessary for CDPHE to re-evaluate the reduced sampling frequency contemplated by Conditions 18.2.2.2 and 18.2.2.3.

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 as described in this Order.

Dated: May 24, 2024



Michael S. Regan
Administrator