BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF	)	
	)	
Clean Air Act Final Initial Class I	)	
Title V Operating Permit	)	
	)	
Issued to South32 Hermosa Inc.,	)	Title V Permit No. 96653
for the South32 Hermosa Mining Project	)	
	)	
Issued by the Arizona Department of	)	
Environmental Quality	)	
	)	

PETITION TO OBJECT TO FINAL CLASS I TITLE V OPERATING PERMIT NO. 96653 FOR SOUTH32 HERMOSA INC.'S HERMOSA MINING PROJECT

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PETITION TO OBJECT

Pursuant to Section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d), the Center for Biological Diversity, Patagonia Area Resource Alliance, Sierra Club—Grand Canyon Chapter, Arizona Mining Reform Coalition, The Calabasas Alliance/La Alianza Calabasas, and Friends of the Santa Cruz River (hereafter "Petitioners") petition the Administrator of the United States Environmental Protection Agency ("Administrator" or "EPA") to object to the final initial Class I Title V Operating Permit ("Title V Permit") issued by the Arizona Department of Environmental Quality ("ADEQ") authorizing South32 Hermosa Inc. (hereafter "South32") to construct and operate the Hermosa Mining Project in Santa Cruz County, Arizona (hereafter "Hermosa Mine").

Petitioners request the EPA object on the basis that the Title V Permit fails to assure compliance with Title V requirements under the Clean Air Act, fails to assure compliance with applicable requirements in the Arizona State Implementation Plan ("SIP"), does not assure the enforceability of a number of permit terms and conditions, and fails to assure compliance with other applicable requirements, including Clean Air Act New Source Performance Standards ("NSPS").

THE HERMOSA MINE

The Hermosa Mine is expected to be a massive mining operation in the Patagonia Mountains of southern Arizona in Santa Cruz County. The mine would develop two underground ore deposits, the Taylor sulfide deposit, from which zinc, lead, and silver would be extracted, and the Clark oxide deposit, from which zinc, manganese, and silver would be extracted. The mine is expected to irreversibly alter the nature and character of this region of the Patagonia Mountains, an exceptionally biodiverse region of southern Arizona.

The Hermosa Mine in the Patagonia Mountains of southern Arizona. Current operations include remediation and exploration. The Title V Permit will authorize full build-out of mining operations as proposed by South32. Photo by Patagonia Area Resource Alliance.

Development of the mine will require the construction and operation of an extensive system of pollutant emitting activities. This will include a significant underground mining operation that will entail blasting, hauling, crushing, and conveying, as well as surface support facilities, including mine shaft ventilation, cooling, power generation from dozens of internal combustion engines, crushing and concentrating, materials handling, tailings management, heavy equipment operations and vehicle traffic, fuel storage, wastewater treatment, and laboratory operations. In its permit application, South32 identified nearly 200 discrete emission units that will be associated with the Hermosa Mine.

Entrance to South32's Hermosa Mining Operations.

The mine will have the potential to release hundreds of tons of air pollutants known to endanger public health and welfare. In addition to releasing a number of harmful criteria air pollutants for which national ambient air quality standards ("NAAQS") have been established, the mine will also release a number of hazardous air pollutants. Hazardous air pollutants are a

group of especially toxic substances regulated under Section 112 of the Clean Air Act that pose disproportionately harmful impacts to public health and the environment. Among the hazardous air pollutants that will be released by mining operations: heavy metals including lead, arsenic, manganese, nickel, and selenium; benzene, a known carcinogen; and other toxic organic compounds including acetaldehyde, acrolein, formaldehyde, xylene, and toluene, hexane, and methanol. The mine will also release more than one million tons of greenhouse gases annually. The table below details the Hermosa Mine's potential to emit for key pollutants.

Potential Emissions from Hermosa Mine as Reported in South32's Application

Pollutant	Total Potential to Emit (tons/year)
Particulate Matter (PM)	653.02
Coarse particulate matter (PM_{10})	222.56
Fine particulate matter ($PM_{2.5}$)	69.24
Nitrogen oxides (NO_x)	203.61
Sulfur dioxide (SO_2)	6.45
Volatile organic compounds (VOCs)	95.94
Lead	1.23
Manganese compounds	5.76
Benzene	0.57
Formaldehyde	18.24
Total Hazardous Air Pollutants	76.19
Carbon dioxide equivalent	1,176,929

PETITIONERS

The Center for Biological Diversity is a nonprofit, 501(c)(3) conservation organization. The Center's mission is to ensure the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health through science, policy, and environmental law. Based on the understanding that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked, the Center is working to secure a future for animals and plants hovering on the brink of extinction, for the ecosystems they need to survive, and for a healthy, livable future for all of us.

Patagonia Area Resource Alliance is a grassroots, community-drive nonprofit dedicated to the preservation and protection of local mountains, wildlife, and watersheds in and around Patagonia, Arizona. The Alliance is a citizen watchdog organization that monitors the activities of mining companies and government agencies to ensure any actions take in or near Patagonia ultimately benefit public lands, water, wildlife, and the community.

The Sierra Club is one of the nation's oldest grassroots organizations whose mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments. The Sierra Club has more than 2.7

million members and supporters with 60,000 in Arizona as part of the Grand Canyon (Arizona) Chapter.

The Arizona Mining Reform Coalition is comprised of groups and individuals that work to ensure that responsible mining contributes to healthy communities, a healthy environment, and, when all costs are factored in, is a net benefit to Arizona. The Coalition expects the mining industry to clean up after itself, comply full and in the spirit of safeguards in place to protect Arizona, and to interact in a transparent and open manner with Arizona communities. Group members of the Coalition include: Apache—Stronghold, Patagonia Area Resource Alliance, Center for Biological Diversity, Concerned Climbers of Arizona, Earthworks, Environment Arizona, Grand Canyon Chapter of the Sierra Club, Groundwater Awareness League, Maricopa County Audubon Society, Save the Scenic Santa Ritas, Tucson Audubon Society, and more.

The Calabasas Alliance/La Alianza Calabasas is group of concerned residents of Santa Cruz County, Arizona working to protect the land, water, air, biodiversity, and public health of this region threatened by the South32's mining activities in and around the community of Patagonia. The mission of the Calabasas Alliance is to advocate for responsible environmental stewardship and sustainable alternatives to mining in Santa Cruz County, Arizona. The organization strives to safeguard the natural beauty, health, and quality of life for current and future generations.

Friends of the Santa Cruz River works to ensure a continued flow of the Santa Cruz River in Santa Cruz County, Arizona and to protect and restore the riparian ecosystem and diversity of life supported by the River's waters.

PROCEDURAL BACKGROUND

ADEQ released the draft Title V Permit for the Hermosa Mine on January 5, 2024.[1] Petitioners submitted timely comments on the draft Title V Permit on February 26, 2024. *See* Exhibit 1, Comments of the Center for Biological Diversity, *et al*. on the draft Title V Permit for the Hermosa Mine (Feb. 26, 2024). Petitioners' comments included detailed technical comments and provided sufficient specificity to alert ADEQ to numerous deficiencies in the draft Title V Permit.

ADEQ responded to comments on June 10, 2024. *See* Exhibit 2, ADEQ Responsiveness Summary to Public Comments (June 10, 2024). The agency responded directly to some of Petitioners' concerns, but did not respond directly to a number of Petitioners' comments. To the extent ADEQ responded to public comments, the agency's Responsiveness Summary to Public Comments is mostly a disorganized jumble of cursory, and in some cases curt, generic responses to various public comments. The agency concurrently issued a proposed final Title V Permit and proposed final Technical Support Document. *See* Exhibit 3, Proposed Final Hermosa Mine Title

[1] Under Arizona's SIP and EPA's approved Title V operating permit program, a Title V Permit is referred to as a "Class I Permit." For purposes of consistency with federal statutory and regulatory language, as well as EPA's prevalent usage of the phrase "Title V Permit" in its review of Title V Petitions, we use the phrase "Title V Permit" to refer to the permit for the Hermosa Mine.

V Permit and Exhibit 4, Proposed Final Technical Support Document ("TSD") for Proposed Final Hermosa Mine Title V Permit. The Title V Permit was then transmitted to EPA for the agency's 45-day review, which ended on July 24, 2024.

While the EPA did not object to the proposed permit during its 45-day review period, the agency did provide comments to ADEQ on July 24, 2024 noting many deficiencies in the Title V Permit. *See* Exhibit 5, EPA Comments on Proposed Final Title V Permit. ADEQ responded to EPA's comments on August 2, 2024, making some changes to the proposed final Title V Permit and proposed final TSD. ADEQ issued the final Title V Permit and final TSD for the Hermosa Mine on August 26, 2024. *See* Exhibit 6, Final Hermosa Mine Title V Permit and Exhibit 7, Final Hermosa Mine Title V Permit TSD.

Pursuant to 42 U.S.C. § 7661d(b)(2), this petition is now timely submitted within 60 days following a lack of objection from the EPA during the agency's 45-day review period.

GENERAL TITLE V PERMITTING REQUIREMENTS

The Clean Air Act prohibits qualifying stationary sources of air pollution from operating without or in violation of a valid Title V permit, which must include conditions sufficient to "assure compliance" with all applicable Clean Air Act requirements. 42 U.S.C. §§ 7661c(a), (c); 40 C.F.R. §§ 70.6(a)(1), (c)(1). "Applicable requirements" include all standards, emissions limits, and requirements of the Clean Air Act, including all requirements in an applicable implementation plan. 40 C.F.R. § 70.2. Congress intended for Title V to "substantially strengthen enforcement of the Clean Air Act" by "clarify[ing] and mak[ing] more readily enforceable a source's pollution control requirements." S. Rep. No. 101-228, at 347, 348 (1990), *as reprinted in* A Legislative History of the Clean Air Act Amendments of 1990, at 8687, 8688 (1993). As EPA explained when promulgating its Title V regulations, a Title V permit should "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." Operating Permit Program, Final Rule, 57 Fed. Reg. 32,250, 32,251 (July 21, 1992). Among other things, a Title V permit must include compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. 42 U.S.C. § 7661c(c); 40 C.F.R. §§ 70.6(a)(1), (c)(1).

Under the Clean Air Act, "any person" may petition EPA to object to a proposed permit "within 60 days after the expiration of [EPA's] 45-day review period." 42 U.S.C. § 7661d(b)(2); *see also* 40 C.F.R. § 70.8. Each objection in the petition must have been "raised with reasonable specificity during the public comment period provided for in § 70.7(h) of this part, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period." 40 C.F.R. § 70.8(d). Any objection included in the petition "must be based on a claim that the permit, permit record, or permit process is not in compliance with applicable requirements or requirements [of 40 C.F.R. Part 70]." 40 C.F.R. § 70.12(a)(2).

Upon receipt of a petition, EPA "*shall* issue an objection within [60 days] if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of this chapter, including the requirements of the applicable implementation plan." 42 U.S.C. § 7661d(b)(2) (emphasis added); *see also* 40 C.F.R. § 70.8(c) ("The Administrator will object to the issuance of any proposed permit determined by the Administrator not to be in compliance with applicable requirements or requirements under this part."). When deciding whether a petitioner has met this demonstration requirement, EPA will evaluate the entirety of the permit record, including the statement of basis and response to comments. *See In re Valero Refining-Texas, L.P.*, Order on Petition No. VI-2021-8 (June 30, 2022).

GROUNDS FOR OBJECTION

For the reasons set forth below, the Title V Permit fails to comply with applicable requirements under the Clean Air Act and requirements under Title V. All of the issues discussed below were raised in comments on the draft Title V Permit for the Hermosa Mine.

I. ADEQ did not properly characterize fugitive versus non-fugitive emissions and erroneously determined the Hermosa Mine was not subject to Clean Air Act Prevention of Significant Deterioration permitting, contrary to the Arizona SIP

In issuing the Title V Permit, ADEQ determined the Hermosa Mine was not subject to Clean Air Act Prevention of Significant Deterioration ("PSD") permitting requirements. However, this determination was based on ADEQ's mistaken presumption that a number of emissions units and activities are fugitive in nature and therefore excluded when calculating whether the mine was subject to PSD. Accordingly, the Title V Permit fails to comply with the Arizona SIP and the Administrator must object to its issuance.

Petitioners raised this issue with reasonable specificity on page 3 of their technical comments. Petitioners explicitly flagged that ADEQ failed to properly characterize fugitive emissions and therefore failed to demonstrate that the Hermosa Mine was not subject to PSD.

A. Arizona SIP Requirements

The Clean Air Act sets forth a comprehensive program for the prevention of significant deterioration of air quality, or PSD, in areas designated as in attainment with national ambient air quality standards. *See* 42 U.S.C. § 7470-7492. As part of this program, the Act sets forth stringent preconstruction permitting requirements for major stationary sources of air pollution, often referred to as PSD permitting. *See* 42 U.S.C. § 7475; *see also* 40 C.F.R. § 51.166 (setting forth PSD permitting requirements that must be incorporated into state plans). The Arizona SIP incorporates the PSD requirements of the Clean Air Act, requiring, among other things, that new major sources comply with the requirements of "[A.A.C.] R18-2-403 through R18-2-410." A.A.C. R18-2-402(B). A.A.C. R18-2-406 specifically sets forth PSD permitting requirements for major sources located in areas designated as unclassifiable or in attainment with national ambient air quality standards.

Under the Arizona SIP, there are two categories of major sources for PSD permitting purposes. The first category includes "categorical sources" listed at A.A.C. R18-2-101(23) and that have the potential to emit 100 tons per year of any regulated NSR (new source review) pollutant. *See* A.A.C. R18-2-401(13)(b). The second category includes sources not listed at A.A.C. R18-2-101(23) and that have the potential to emit 250 tons per year of any regulated NSR pollutant. *Id*.; *see also*, 40 C.F.R. § 51.166(b)(1)(i)(a) and (b).[2]

In calculating whether a source is major under the Arizona SIP, fugitive emissions are included only for categorical sources. *See* A.A.C. R18-2-401(13)(e). Fugitive emissions are defined in the SIP as emissions "which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening." A.A.C. R18-2-101(59).[3] In interpreting this definition, the EPA has consistently explained that a determination of whether emissions can "reasonably pass through a stack, chimney, vent, or other functionally equivalent opening" is based on an assessment of whether emissions can reasonably be collected and passed through such openings. *See* Exhibit 8, EPA, "Interpretation of the definition of fugitive emissions in Parts 70 and 71," Memo from Thomas C. Curran to Judith Katz (Feb. 10, 1999) at 2. When assessing whether emissions can reasonably be collected, EPA has further held that a determination of "reasonableness" should be construed "broadly." Exhibit 9, EPA, "Classification of emissions from landfills for NSR applicability purposes," Memo from John S. Seitz to Regional Air Division Directors (Oct. 21, 1994) at 2. EPA has generally held that where emission collection technology is in use by other sources within the same source category or by a similar pollutant emitting activity, there is a presumption that collection is reasonable. *Id*.

Major sources subject to PSD permitting under the Arizona SIP must meet, among other things, best available control technology ("BACT") requirements. See A.A.C. R18-2-406(A)(1). BACT is defined as "an emission limitation, including a visible emissions standard, based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major source [] taking into account energy, environmental, and economic impact and other costs[.]" A.A.C. R18-2-101(21). Major sources subject to PSD must also demonstrate that their emissions will not cause or contribute to violations of the NAAQS, not exceed allowable increases in air pollutants set forth at A.A.C. R18-2-218, and protect visibility and other air quality-related values. *See* A.A.C. R18-2-406(A)(5) and R18-2-410.

B. ADEQ's Assessment of Fugitive Emission Sources Was Not Consistent With The Arizona SIP

In issuing the Title V Permit, ADEQ concluded the Hermosa Mine was not a major source subject PSD permitting requirements under the Arizona SIP. This conclusion, however, is not supported.

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[2] Under the Arizona SIP, a "regulated NSR pollutant" is broadly defined to include any pollutant subject to regulation under the Clean Air Act. *See* A.A.C. R18-2-101(124)(b)(iii).

[3] This definition echoes federal regulations governing PSD and Title V permitting under the Clean Air Act. *See* 40 C.F.R. § 51.166(b)(20) and 40 C.F.R. § 70.2.

In the proposed TSD, ADEQ noted the mine is located in an area designated as attainment or unclassifiable for all NAAQS. ADEQ further noted the mine is not a categorical source and therefore subject to the 250 ton per year major source threshold and that fugitive emissions are not included in calculating potential to emit. *See* Exhibit 7, TSD at 13. In assessing the Hermosa Mine's potential to emit, ADEQ asserted that non-fugitive emissions of all regulated NSR pollutants would be below 250 tons per year. *Id*. Unfortunately, ADEQ's assertion was not based on a characterization of fugitive emissions consistent with the Arizona SIP.

Of primary concern is that it appears ADEQ accepted South32's claims that a number of particulate matter emission points are fugitive when they appear to be non-fugitive. In its permit application, South32 lists each emission point and identifies whether the point is fugitive or not. *See* Exhibit 10, South32 Hermosa Mine Class I Permit Application (Dec. 2023), Appendix A at 18-23. While South32 does not explain how it determined whether emissions points were or were not fugitive and does not reference the Arizona SIP's definition of fugitive emissions, it appears that for a number of emission points, emissions could reasonably be collected and passed through openings, meaning they are not actually fugitive emissions.

There are two primary categories of particulate matter emission points that appear to be misclassified as fugitive emission sources: drops and stockpiles.

For drops, South32 claims in its application that the following emission points are sources of fugitive particulate matter:

Emission Point Number	Emission Activity
DP-1	Drop of the crushed ore from the mine to the 21200-BIN-001 Mine Shaft Ore Bin
DP-2	Drop from 21200-BIN-001 Mine Shaft Ore Bin to 21200-FOR-001 Mine Shaft Ore Discharge Feeder
DP-18	Drop from 21710-CV-00001 Primary Mill Feed Conveyor to 22100-CH-00001 Primary Mill Feed Chute
DP-21	Drop from 22210-CV-00002 Primary Screen Discharge Conveyor to 22210-CV-0001 Pebble Crusher Feed Conveyor
DP-22	Drop from 22210-CV-00001 Pebble Crusher Feed Conveyor to 22210-CH-00001 Pebble Crusher Feed/Bypass Chute
DP-23	Drop from 22210-CH-00001 Pebble Crusher Feed/Bypass Chute to 22210-BN-00001 Pebble Crusher Feed Bin

DP-24	Drop from 22210-BON-0001 Pebble Crusher Feed Bin to 22210-FE-00001 Pebble Crusher Feeder
DP-25	Drop from 22210-FE-00001 Pebble Crusher Feeder to 22210-CR-00001 Pebble Crusher
DP-26	Drop from 22210-CR-00001 Pebble Crusher to 22210-BN-00002 Pebble Crusher Product Surge Bin
DP-27	Drop from 22210-BN-00002 Pebble Crusher Product Surge Bin to 22210-FE-00002 Pebble Crusher Product Return Feeder
DP-28	Drop from 22210-FE-00001 Pebble Crusher Product Return Feeder to 21710-CV-00001 Primary Mill Feed Conveyor
DP-82	Drop on West Rock Stockpile
DP-83	Drop on East Rock Stockpile
DP-84	Tailings Storage Facility Drop
DP-103	Dump into primary crusher feed hopper
DP-104	Drop from silo to trucks
DP-105	Transfer of Ore from Ore Stockpile to Loader
DP-106	Transfer of Ore Mined from Loader to Haul Truck
DP-107	Transfer from ROM Stockpile to Loader
DP-109	Transfer from Agg Stockpile to Loader
DP-110	Transfer of Agg Material from Loader to Haul Truck
DP-111	Transfer of Shotcrete Aggregate from Stockpile to Loader
DP-113	Hardshell Waste Rock Storage Drop
DP-114	Ore Stockpile Drop
DP-115	ROM Stockpile Drop

However, the claim that these drops are fugitive emission points is undercut by South32's own application, as well as the Title V Permit.

To begin with, particulate emissions from a number of other drops will actually be captured and controlled using dust collection systems, indicating that emissions from drops can reasonably be collected. As South32 states in its application, particulate emissions from DP-3, DP-4, DP-6, DP-7, DP-8, DP-9, DP-10, DP-11, DP-12, DP-13, DP-14, DP-15, DP-16, and DP-17 are all required to be controlled using a "Coarse Ore Dust Collection System." Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 35.[4] Specifically, the Title V Permit requires that particulate emissions form DP-15, DP-16, and DP-17 be controlled using the "21300-DCD-006 Silo Discharge Dust Collection System (DC-6)[.]" Exhibit 6, Title V Permit

[4] Appendix A to South32's Application contains two sections, one for Plan I development emissions that is 85 pages long and one for Plan II development emissions that is 84 pages long. When referring to Appendix A in this Petition, we refer to the 85-page Plan I emissions data in the first part of Appendix A.

at 27, Attachment "B" Condition III.A.3.(c). The Title V Permit also requires that particulate emissions from DP-3, DP-4, and DP-6 be controlled using the "21200-DCD-001 Coarse Ore Dust Collection System (DC-1)[.]" *Id*. at 34, Attachment "B" Condition III.B.4.(d). The Title V Permit also requires that particulate emissions from DP-9 be controlled by the "21300-DCD-003 Coarse Ore Silo Collection System (DC-3)," that emissions from DP-7 and DP-10 be controlled by the "21300-DCD-004 Coarse Ore Silo Collection System (DC-4)," that emissions from DP-8 and DP-11 be controlled by the "21300-DCD-005 Coarse Ore Silo Collection System (DC-5)," and that emissions from DP-12, DP-13, and DP-14 be controlled by the "21300-DCD-006 Silo Discharge Dust Collection System (DC-6)." *Id*. at 34-35, Attachment "B" Conditions III.B.4.(f), III.B.4.(g), III.B.4.(h), and III.B.4.(j). These permit requirements indicate that emissions from drops can be reasonably collected with dust collection systems.

Furthermore, some of the drop points that South32 claims are sources of fugitive particulate matter emissions will actually be enclosed, indicating these emissions can be collected. South32's application states that DP-1, DP-2, DP-18, DP-103, and DP-104 will be partially enclosed. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 35, 44. If these emission points are enclosed, even partially, then this indicates particulate matter emissions can be collected. If these drop points can be enclosed, even partially, there is no reason other drop points can't also be enclosed and emissions collected.

There are many companies offering dust collection systems for use in the mining industry and in particular for material transfer points and drops. The company, Donaldson Filtration Solutions, offers dust collection systems for truck dumps, crushers, screens, conveyor belt transfer points, silos or bin filling, and truck loading. *See* Exhibit 11, Donaldson Filtration Solutions, "Mining and Mineral Processing," website available at https://www.donaldson.com/en-us/industrial-dust-fume-mist/industries/mining-mineral-processing/ (last accessed September 12, 2024). The company RoboVent also offers dust collection systems for excavation sites, conveyors, belt transfer points, weigh-belt feeders, ore storage bins and silos, crushers and grinders, hammer mills and ball mills, screeners, and blenders. *See* Exhibit 12, RoboVent, "Dust Collection for Mining and Mineral Processing," website available at https://www.robovent.com/industrial-dust-collection/mining/ (last accessed September 12, 2024). Again, this confirms that emissions from all drops can reasonably be collected and controlled, meaning they are not fugitive.

For stockpiles, including emission points TSF_3, WRS, ERS, TAGG, TSHOT, HRS, ORE, ROM, AGG, and SHOT, South32 appears to classify them all as sources of fugitive particulate matter. However, stockpiles can be enclosed, allowing for the capture of emissions and the ability to release them through a vent, stack or functionally equivalent opening. Enclosed stockpiles are utilized at mining operations around the world and companies offer custom-engineered enclosures. *See e.g.* Exhibit 13, Bulk Storage Domes offered by Geometrica, website available at https://www.geometrica.com/en/bulk-subsection-english (last accessed September 12, 2024). As Geometrica explains on its website:

> Power plants, grain dealers, mines, cement plants, ports and many other industries need to stock large quantities of dry bulk materials. These are often left uncovered, or stored in vertical silos. But silos are small and expensive, while open stockpiles are subject to

> material spoilage, and pollute with dust and runoff. A dome is a smart investment. Organizations that store feed, ores or solid fuels have looked for and found a cost effective way to solve their large storage needs: Geometrica's geodesic domes.

Id. There are other examples of mining companies enclosing stockpiles in order to control particulate matter emissions. In Arizona, the company Hudbay Minerals, Inc. plans to construct a new mine called the Copper World Project that will utilize an enclosure for a copper concentrate stockpile. In its air permit application, the company explains, "The copper concentrate stockpile is enclosed in a building to prevent the release of windblown fugitives." Exhibit 14, Trinity Consultants, ADEQ Class II Permit Application, Copper World Project (October 2022) at 2-6.

If fugitive emissions were properly characterized, the potential to emit for the Hermosa Mine would exceed PSD permitting thresholds for PM, a regulated NSR pollutant.[5] Based on the emissions data in South32's application, total PM from drops and stockpiles currently considered sources of fugitive emissions would be more than 48 tons per year. Given that these are actually non-fugitive emissions, this would mean the Hermosa Mine's potential to emit for PM is actually higher than 250 tons per year of PM, not the 208.04 tons per year reported in South32's application and in the proposed TSD. Added together, total non-fugitive PM emissions would be at least 256.94 tons per year.[6] The table below details total PM and PM_{10} emissions from drops and stockpiles as set forth in South32's application.

PM and PM_{10} Emissions, in Tons per Year, from Drops and Stockpiles at the Hermosa Mine That are Improperly Categorized as Fugitive

Emission Point Number	Emission Activity	PM Emissions	PM10 Emissions
DP-1	Drop of the crushed ore from the mine to the 21200-BIN-001 Mine Shaft Ore Bin	1.98	0.94
DP-2	Drop from 21200-BIN-001 Mine Shaft Ore Bin to 21200-FOR-001 Mine Shaft Ore Discharge Feeder	1.98	0.94
DP-18	Drop from 21710-CV-00001 Primary Mill Feed Conveyor to 22100-CH-00001 Primary Mill Feed Chute	1.98	0.94

[5] Although total PM_{10} emissions would not exceed PSD permitting thresholds if fugitive emissions were properly categorized, total non-fugitive emissions would exceed the major source threshold of 100 tons per year under Title V. Thus, in addition to being a major source under Title V for CO, NO_x, and HAPs, the Hermosa Mine would also be a major source for PM_{10}.

[6] As will be detailed further in this Petition, the accuracy of ADEQ's calculation of potential to emit is also undermined by a lack of enforceability of a number of permits terms and conditions, insufficient monitoring, and inadequate operational requirements and limitations. Although we utilize ADEQ's and South32's emissions calculations to estimate total non-fugitive emissions in this case, the actual potential to emit for all pollutants, including PM and PM_{10}, is likely much higher.

DP-21	Drop from 22210-CV-00002 Primary Screen Discharge Conveyor to 22210-CV-0001 Pebble Crusher Feed Conveyor	1.29	0.61
DP-22	Drop from 22210-CV-00001 Pebble Crusher Feed Conveyor to 22210-CH-00001 Pebble Crusher Feed/Bypass Chute	1.29	0.61
DP-23	Drop from 22210-CH-00001 Pebble Crusher Feed/Bypass Chute to 22210-BN-00001 Pebble Crusher Feed Bin	1.29	0.61
DP-24	Drop from 22210-BON-0001 Pebble Crusher Feed Bin to 22210-FE-00001 Pebble Crusher Feeder	1.29	0.61
DP-25	Drop from 22210-FE-00001 Pebble Crusher Feeder to 22210-CR-00001 Pebble Crusher	1.29	0.61
DP-26	Drop from 22210-CR-00001 Pebble Crusher to 22210-BN-00002 Pebble Crusher Product Surge Bin	1.29	0.61
DP-27	Drop from 22210-BN-00002 Pebble Crusher Product Surge Bin to 22210-FE-00002 Pebble Crusher Product Return Feeder	1.29	0.61
DP-28	Drop from 22210-FE-00001 Pebble Crusher Product Return Feeder to 21710-CV-00001 Primary Mill Feed Conveyor	1.29	0.61
DP-82	Drop on West Rock Stockpile	0.67	0.32
DP-83	Drop on East Rock Stockpile	0.74	0.35
DP-84	Tailings Storage Facility Drop	1.38	0.65
DP-103	Dump into primary crusher feed hopper	0.29	0.14
DP-104	Drop from silo to trucks	0.96	0.46
DP-105	Transfer of Ore from Ore Stockpile to Loader	0.58	0.27
DP-106	Transfer of Ore Mined from Loader to Haul Truck	0.58	0.27
DP-107	Transfer from ROM Stockpile to Loader	0.16	0.08
DP-109	Transfer from Agg Stockpile to Loader	0.08	0.04
DP-110	Transfer of Agg Material from Loader to Haul Truck	0.08	0.04
DP-111	Transfer of Shotcrete Aggregate from Stockpile to Loader	0.08	0.04
DP-113	Hardshell Waste Rock Storage Drop	2.6	1.23
DP-114	Ore Stockpile Drop	0.58	0.27
DP-115	ROM Stockpile Drop	0.16	0.08
HRS	Hardshell Rock Stockpile	2.74	1.37
ORE	Clark Ore Stockpile	0.12	0.06

ROM	Clark ROM Stockpile	0.04	0.02
TSF_3	Tailing Storage Facility	19.29	9.65
WRS	West Rock Stockpile	0.72	0.36
ERS	East Rock Stockpile	0.79	0.4
	TOTAL NON-FUGITIVE EMISSIONS	**48.9**	**23.8**

C. ADEQ's Response to Comments did not Resolve This Issue

In response to Petitioners' comments on this issue, ADEQ simply asserted that it "characterized fugitive and non-fugitive emissions accurately in the proposed air quality permit." Exhibit 2, Responsiveness Summary to Public Comments at 16. ADEQ stated further:

> Non-fugitive emissions will be emitted from stacks or vents, or captured and routed to air pollution control equipment. Sections III through VII of Attachment "B" include requirements for non-fugitive emissions. Section VIII of Attachment "B" defines fugitive emissions as non-point sources of fugitive dust in the facility. Fugitive emissions will come from open roads, parking lots, stockpiles and tailings storage facilities. These determinations are consistent with how these fugitive and non-fugitive emissions are characterized in other air quality permits for mines.

Id. This response appears to indicate ADEQ believes non-fugitive emissions include only those that "will" be released from stacks or vents, or otherwise collected and routed to air pollution control equipment. However, as the Arizona SIP clearly states, non-fugitive emissions include those that "could" reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. A.A.C. R18-2-101(59). In this case, ADEQ appears to have incorrectly interpreted the SIP in dismissing Petitioners' concerns.

Although ADEQ asserts its determinations are consistent with other air quality permits for mines, it is not clear how the agency reached this conclusion. ADEQ cites to no specific permit or permits to support its claim that the approach in the Title V Permit is "consistent" with other permits. Regardless, simply because the Title V Permit may be consistent with prior permitting does not authorize ADEQ to ignore the plain language of the Arizona SIP. ADEQ must ensure that Title V Permits assure compliance with all applicable requirements. *See* 40 C.F.R. § 70.7(a)(1). If anything, if the Title V Permit is consistent with other permits, then it highlights that ADEQ may be systematically failing to properly characterize fugitive emissions at mines throughout Arizona.

D. The Administrator Must Object

Title V permits must assure compliance with the "applicable implementation plan." 42 U.S.C. § 7661c(a). To this end, they must assure compliance with all applicable requirements, which include "[a]ny requirement [] provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the [Clean Air] Act[.]" 40 C.F.R. § 70.2. Accordingly, the Title V Permit for the Hermosa Mine must assure compliance with the Arizona SIP. Unfortunately, the Title V Permit does not.

Not only did ADEQ incorrectly interpret and apply the SIP's definition of fugitive emissions when calculating potential to emit, the agency incorrectly determined the Hermosa Mine was not a major source under the SIP's PSD permitting requirements. At a minimum, ADEQ incorrectly determined the Hermosa Mine was not a major source of PM and therefore subject to PSD permitting. Accordingly, ADEQ also failed to ensure the Hermosa Mine was subject to applicable PSD requirements, including BACT.

Accordingly, pursuant to 42 U.S.C. § 7661(b)(2) and 40 C.F.R. § 70.8(d), the Administrator has a nondiscretionary duty to object to the issuance of the Title V Permit for the Hermosa Mine. The Administrator must object over the failure of ADEQ to comply with SIP when characterizing fugitive emissions, calculating potential to emit, and in determining the Hermosa Mine was not a major source subject to PSD permitting. At a minimum, the Administrator must object over the failure of the permitting record to contain any information or analysis demonstrating that fugitive emissions were in fact characterized consistent with the Arizona SIP.

II. The Title V Permit contains numerous terms and conditions that are unenforceable and/or lack sufficient monitoring to assure compliance with applicable limitations and requirements

The Title V Permit is riddled with terms and conditions that are unenforceable as a practical matter. Compounding this problem is that many terms and conditions also lack sufficient periodic monitoring to assure compliance with applicable limits. Given this, the Title V Permit does not sufficiently limit the Hermosa Mine's potential to emit, calling into question ADEQ's claims that the Hermosa Mine is not subject to PSD permitting under the Arizona SIP.

A. Clean Air Act Background

Emission limitations and standards within a Title V permit must be "enforceable." 42 U.S.C. § 7661c(a). To be enforceable, terms and conditions must be enforceable as a practical matter. *In the Matter of Plains Marketing LP, et al.*, Order on Petition Nos. IV-2023-1 and IV-2023-3 at 30 (Sept. 18, 2023). Inherent in this requirement is that limitations and standards must be unambiguous, understandable, and capable of informing regulators and the public as to what is actually required. *See e.g., In the Matter of West Elk Coal Mine*, Order on Petition VIII-2024-3 at 33 (May 24, 2024) (noting that ambiguity can render conditions unenforceable).

Further, to be enforceable as a practical matter, limits must be supported by monitoring, recordkeeping and reporting requirements "sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action." *In the Matter of Pencor-Masada Oxynol*, LLC, Order on Petition No. II-2001-05 at 7 (April 8, 2002). To this end, a Title V permit must contain "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit[.]" 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). Where a Title V permit fails to require sufficient monitoring to assure compliance, the permit

cannot provide information necessary to determine whether a source is in compliance and therefore is not enforceable as a practical matter.

B. Emission Limitations and Standards in the Title V Permit are Unenforceable and/or Fail to Assure Compliance with Applicable Requirements

The following permit Conditions are unenforceable as a practical matter and/or otherwise fail to assure compliance with applicable requirements, including failing to ensure sufficient periodic monitoring. Below Petitioners detail issues with each these Conditions, address ADEQ's response to comments. For each Condition, and explain the need for the Administrator to object to each Condition.

1. Attachment "B," Condition II

This Condition establishes operational and other limitations for operations at the Hermosa Mine. Unfortunately, the Condition does not set forth sufficiently specific limits and sufficient periodic monitoring such that the operational and other limitations are enforceable as a practical matter. Petitioners raised this issue with reasonable specificity on pages 9-15 of their technical comments.

a) Attachment "B", Condition II.D.1.e

Condition II.D.1.e limits the amount of total "Development Ore mined" at the Taylor site to 413,389 tons per year. However, the term "development ore" is not defined and it is not clear what this term refers to. It is also not clear how South32 will accurately and consistently identify "development ore" such that it will have any basis to demonstrate compliance with this limit. It is also not clear what the word "mined" means. As Petitioners' questioned in their comments, "At what point is 'development ore' considered mined? Is it when ore is removed permanently from an ore body or does it include movement of development ore through blasting and heavy machinery?" Exhibit 1, Comments on Draft Title V Permit at 11. Given the lack of clarity, this Condition is not enforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no definition of "development ore" and what it means

to be "mined" in the context of the Title V Permit. To the extent that the words "development ore" or "mined" can be searched online, this does not provide any insight as to how they apply in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.1.e.

The response to comments otherwise provides no further insight into what the terms "development ore" or "mined" mean in the context of compliance with the 413,389 tons per year limit.

2) The Administrator Must Object

Condition II.D.1.e is unenforceable as a practical matter given that the Title V Permit does not explain what "development ore" means or what "mined" means in the context of compliance with the applicable limit. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

b) Attachment "B", Condition II.D.1.f

Condition II.D.1.f limits the amount of total "Stope Ore mined" at the Taylor site to 4,618,867 tons per year. However, the term "stope ore" is not defined and it is not clear what this term refers to. It is also not clear how South32 will accurately and consistently identify "stope ore" such that it will have any basis to demonstrate compliance with this limit. There are clearly different types of ore being mined, yet it is not clear how these different types are determined and how South32 will demonstrate compliance. And again, it is also not clear what the word "mined" means. As Petitioners' questioned in their comments, "At what point is 'stope ore' considered mined? Is it when ore is removed permanently from an ore body or does it include movement of ore through blasting and heavy machinery?" Exhibit 1, Comments on Draft Title V Permit at 11. Given the lack of clarity, this Condition is not enforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of

definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no definition of "stope ore" and what it means to be "mined" in the context of the Title V Permit. To the extent that the words "stope ore" and "mined" can be searched online, this does not provide any insight as to how they apply in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.1.f.

The response to comments otherwise provides no further insight into what the terms "stope ore" or "mined" mean in the context of compliance with the 4,618,867 tons per year limit.

2) The Administrator Must Object

Condition II.D.1.f is unenforceable as a practical matter given that the Title V Permit does not explain what "stop ore" means or what "mined" means in the context of compliance with the applicable limit. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

c) Attachment "B", Conditions II.D.1.g and II.D.1.h

Conditions II.D.1.g and II.D.1.h limit the amount of total "rock processed by the Primary Crusher" to 37,032 tons per day and 4,665,131 tons per year at the Taylor site. It is not clear what "rock" is referring to. Especially given that the Title V Permit refers to and sets limits for other materials, such as ore, "rock" clearly has a distinct meaning in the context of compliance and a lack of a definition is problematic. As Petitioners' questioned in their comments, "In referring to "rock," does this term also include ore or other materials that may not be considered

"rock"? Exhibit 1, Comments on Draft Title V Permit at 11. This Condition is not enforceable as a practical matter given its lack of detail and explanation.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no specific definition of "rock." To the extent that the word "rock" can be searched online, this does not provide any insight as to how it applies in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Conditions II.D.1.g and II.D.1.h.

The response to comments otherwise provides no further insight into what the term "rock" means in the context of compliance with the 37,032 tons per day and 4,665,131 tons per year processing limit.

2) The Administrator Must Object

Conditions II.D.1.g and II.D.1.h are unenforceable as a practical matter given that the Title V Permit does not explain what the term "rock" means in the context of compliance with the applicable limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

d) Attachment "B", Condition II.D.1.i

Condition II.D.1.i limits the amount of total "rock processed by the Pebble Crusher" to 5,280 tons per day at the Taylor site. As Petitioners noted in their comments, it is not clear what "rock" is referring to. *See* Exhibit 1, Comments on Draft Title V Permit at 11

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.1.i.

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no specific definition of "rock." To the extent that the word "rock" can be searched online, this does not provide any insight as to how it applies in the context of the Hermosa Mine and the Title V Permit.

The response to comments otherwise provides no further insight into what the term "rock" means in the context of compliance with the 5,280 tons per day processing limit for the pebble crusher.

2) The Administrator Must Object

Condition II.D.1.i is unenforceable as a practical matter given that the Title V Permit does not explain what the term "rock" means in the context of compliance with the applicable limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

e) Attachment "B", Condition II.D.2.e

Condition II.D.2.e limits the amount of "total rock processed by the Rock Breaker" to 47,131 tons per year at the Clark site. Again, it is not clear what the term "rock" is referring to. Furthermore, as Petitioners' explained in their comments, it is not clear what the term "Rock Breaker" refers to. A "Rock Breaker" is not identified in Attachment "C" and it does not appear that the Title V Permit explicitly authorizes the construction and operation of a "Rock Breaker." Petitioners' also noted in their comments that, "It is also not clear what 'processed' means and at what point at the 'Rock Breaker' processing is measured." Exhibit 1, Comments on Draft Title V Permit at 13.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no specific definition of "rock" and no specific reference to the term "rock breaker." To the extent that the word "rock" or "rock breaker" can be searched online, this does not provide any insight as to how they applies in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.2.e.

ADEQ also generally responds to comments that the Title V Permit does not specify the pollutant emitting operations that would be permitted. *See* Exhibit 2, Responsiveness Summary to Public Comments at 30. ADEQ generally responds that, "In Attachment 'B' of the permit, under each section, there is a subsection 'Applicability', which tells what equipment in

Attachment 'C' the requirements in this section apply to." *Id*. However, under the "Applicability" paragraph in Section II of Attachment "B", the Title V Permit only states, "This Section is applicable to facility-wide operations." Not only does this Section not even refer to Attachment "C", it does not refer to or provide any additional information regarding any specific equipment, such as a rock breaker.

The response to comments otherwise provides no further insight into what the term "rock" means in the context of compliance with the 47,131 tons per year processing limit for the rock breaker or explain what the rock breaker is.

2) The Administrator Must Object

Condition II.D.2.e is unenforceable as a practical matter given that the Title V Permit does not explain what the terms "rock" or "rock breaker" means in the context of compliance with the applicable limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

f) Attachment "B", Condition II.D.2.f

Condition II.D.2.f limits the amount of total "total ore mined" to 733,798 tons per year at the Clark site. The term "ore" is not defined and it is not clear what this term refers to, particularly given that previous Conditions of the Title V Permit refer to other types of "ore." It is also not clear how South32 will accurately and consistently identify "total ore" such that it will have any basis to demonstrate compliance with this limit. It is also not clear what the word "mined" means. As Petitioners' questioned in their comments, "At what point is 'total ore' considered mined? Is it when ore is removed permanently from an ore body or does it include movement of ore through blasting and heavy machinery?" Exhibit 1, Comments on Draft Title V Permit at 13. Given the lack of clarity, this Condition is not enforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no specific definition of "ore" or what it means to be "mined." To the extent that the words "ore" and "mined" can be searched online, this does not

provide any insight as to how they apply in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. Yet if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.2.f.

The response to comments otherwise provides no further insight into what the terms "total ore" or "mined" mean in the context of compliance with the 733,798 tons per year limit.

2) The Administrator Must Object

Condition II.D.2.f is unenforceable as a practical matter given that the Title V Permit does not explain what the terms "total ore" or "mined" means in the context of compliance with the applicable limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

g) Attachment "B", Condition II.D.2.g

Condition II.D.2.g limits the amount of total "rock processed by the Primary Crusher" to 2,904 tons/day. It is not clear what "rock" is referring to. As Petitioners' questioned in their comments, "In referring to 'rock,' does this term also include ore or other materials that may not be considered 'rock.'" Exhibit 1, Comments on Draft Title V Permit at 13. This Condition is not enforceable as a practical matter given its lack of detail and explanation as to what rock is.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to comments related to this Condition as there is no direct response to this issue. The agency responded generally to concerns over a lack of definitions in the draft Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. ADEQ stated:

> The Department did not define every term in the proposed air quality permit as definitions can be found in the Arizona Revised Statutes, Arizona Administrative Code, or Code of Federal Regulations. Additionally, some of these terms are commonly used and thus, they are also readily available online.

Id. In a review of the Arizona Revised Statutes, Arizona Administrative Code, and Code of Federal Regulations, Petitioners can find no specific definition of "rock." To the extent that the word "rock" can be searched online, this does not provide any insight as to how it applies in the context of the Hermosa Mine and the Title V Permit.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition II.D.2.g.

The response to comments otherwise provides no further insight into what the term "rock" means in the context of compliance with the 2,904 tons per day processing limit for the primary crusher.

2) The Administrator Must Object

Condition II.D.2.g is unenforceable as a practical matter given that the Title V Permit does not explain what the term "rock" means in the context of compliance with the applicable limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

h) Attachment "B", Condition II.D.4

This Condition purports to assure sufficient monitoring to assure compliance with the limits established in Attachment "B", Conditions II.D.1 and II.D.2. Unfortunately, as Petitioners' noted in their comments, "it does not set forth sufficient periodic monitoring to assure compliance in accordance with 40 C.F.R. §§ 70.6(a)(3)(i)(B) and (c)(1)." Exhibit 1, Comments on Draft Title V Permit at 13-15.

Condition II.D.4.b requires South32 to "record the total tons of daily rock mined (including ore and waste rock)." To begin with, as Petitioners' noted in their comments, this Conditions is riddled with ambiguity. It is not clear what "rock" refers to. The Condition appears to imply that "rock" includes "ore" and "waste rock," yet the Title V Permit establishes separate limits for "rock" and "ore." It is also not clear what is referred to by "ore" and "waste rock." The terms "ore" and "waste rock" are not defined such that it is understood what is to be monitored under this Condition. It is also not clear what "mined" means for purposes of measuring "daily rock mined." As discussed earlier, there are question around when a material is considered "mined" for purposes of compliance with applicable limits.

Most importantly, Condition II.D.4.b does not constitute sufficient periodic monitoring because it does not set forth any specific method or means of measuring "daily rock mined" such that it ensures South32 accurately and reliably measures "daily rock mined." A Title V permit must contain sufficient periodic monitoring that assures the "use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement." 40 C.F.R. § 70.6(a)(3)(i)(B). Here, simply requiring South32 to "record total tons of daily rock mined" does not explain how South32 is to accurately measure and record total tons of daily rock mined such that monitoring yields data consistent with the applicable requirement.

Beyond requiring that "total rock mined" be recorded, the Title V Permit does not otherwise set forth monitoring that assures compliance with other provisions of Condition II.D, including:

- Monitoring of development ore mined at the Taylor site. Condition II.D.1.e limits mining of "development ore," yet Condition II.D.4 does not set forth any monitoring of "development ore mined" to assure compliance.

- Monitoring of stope ore mined at the Taylor site. Condition II.D.1.f limits mining of "stope ore," yet Condition II.D.4 does not set forth any monitoring of "stope ore mined" to assure compliance.

- Monitoring of rock processed by the Primary Crusher at the Taylor site. Conditions II.D.1.g and II.D.1.h limit the total of "rock processed by the Primary Crusher," yet Condition II.D.4 does not set forth any monitoring of rock processing at the Primary Crusher at the Taylor site.

- Monitoring of rock processed by the Pebble Crusher at the Taylor site. Condition II.D.1.i limits the amount of total "rock processed by the Pebble Crusher," yet Condition II.D.4 does not set forth any monitoring of rock processing by the Pebble Crusher at the Taylor site.

- Monitoring of rock processed by the Rock Breaker at the Clark site. Condition II.D.2.e limits the amount of "total rock processed by the Rock Breaker," yet Condition II.D.4 does not set forth any monitoring of rock processing by the rock breaker at the Clark site. A lack of monitoring is compounded by the fact that the rock breaker is not listed in Attachment "C" of the Title V Permit among the permitted equipment for the Hermosa Mine.

- Monitoring of ore mined at the Clark site. Condition II.D.2.f limits the "total ore mined," yet Condition II.D.4 does not set forth any monitoring of "ore mined."

- Monitoring of rock processed by the Primary Crusher at the Clark site. Condition II.D.2.g limits the amount of total "rock processed by the Primary Crusher." Yet Condition II.D.4 does not set forth any monitoring of rock processing by the Primary Crusher at the Clark site

For the applicable limits at Condition II.D.1 and II.D.2 to be both practically and federally enforceable, any permit must set forth specific periodic monitoring sufficient to yield reliable data form the relevant time period that are representative of South32's compliance with the permit. Here, the Title V Permit sets forth no monitoring whatsoever.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to Petitioners' issues regarding Condition II.D.4. Although ADEQ responded to a comment regarding manufacturer's specifications and O&M plans required under Condition II.D.4.c, there is no direct response to Petitioners' concerns as they relate to Condition II.D.4.b and the overall failure of Condition II.D.4 to assure sufficient periodic monitoring that assures compliance with Conditions II.D.1.e., II.D.1.f, II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, II.D.2.f, and II.D.2.g. ADEQ did respond very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, the Title V Permit very clearly does not set forth monitoring that assures compliance with Conditions II.D.1.e., II.D.1.f, II.D.1.g, II.D.1.h, II.D.1.i, II.D.2.e, II.D.2.f, and II.D.2.g. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination.

The response to comments otherwise provides no further insight into how ADEQ determined Condition II.D.4 set forth sufficient periodic monitoring.

2) The Administrator Must Object

Condition II.D.4 fails to set forth sufficient periodic monitoring to assure compliance with applicable limits set forth at Condition II. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring to assure compliance with applicable emission limitations and standards.

2. Attachment "B", Condition III.A

This Condition establishes general limitations for equipment and operations associated with metallic mineral processing operations, or equipment and operations subject to A.A.C. R18-2-721. Unfortunately, the Condition does not set forth sufficiently specific limits and sufficient periodic monitoring such that the operational and other emission limitations are enforceable as a practical matter. Petitioners raised concerns with the following provisions of Attachment "B" Condition III.A with reasonable specificity on pages 15-22 of their technical comments.

a) Attachment "B", Condition III.A.2

Condition III.A.2.a purports to establish particulate matter limits applicable to metallic mineral processing operations, or equipment and operations subject to A.A.C. R18-2-72 . However, this Condition is not enforceable in a number of regards.

To begin with, Condition III.A.2.a.(1) specifically explains that sources must limit the "discharge of particulate matter in any one hour," but is not clear where equipment or activities subject to this Condition, or the applicable particulate limits in R18-2-721, must limit the discharge of particulate matter from. We are especially concerned that Attachment "C" does not identify where particulate matter is discharged (e.g., stacks, vents, or other functionally equivalent openings) from the equipment or activities subject to Condition III.A. The Title V Permit just generally references the equipment list in Attachment "C", but it is not clear based on this list where particulate matter is emitted in order to assure compliance with the applicable limits. Although it appears that some sources, such as dust collectors, may have discrete points where particulate matter is emitted, it is not entirely clear where particular matter is actually emitted from these and other sources subject to the Condition. Because the draft Title V permit does not identify from where particulate matter is discharged from the applicable equipment or activities, this Condition is not enforceable.

This concern is underscored by a number of inconsistencies in the Title V Permit.

For example, Attachment "C" of the Title V Permit states that the "Primary Mill" (Equipment ID No. 22110-ML-00001), "Secondary Mill" (Equipment ID No. 22120-ML-00001), "Lead Regrind Mill" (Equipment ID No. 22320-ML-00001), and Zinc Regrind Mill" (Equipment ID No. 22320-ML-00002) at the Taylor site are subject to A.A.C. R18-2-721. However, South32's application does not disclose potential particulate emissions from the "Primary Mill," "Secondary Mill," "Lead Regrind Mill," and Zinc Regrind Mill" at the Taylor site. Although the Title V Permit appears to imply that there are particulate matter emissions from these sources, perhaps there are actually no particulate emissions associated with these units. In either case, a lack of specificity makes it is unclear how the Title V Permit governs these units as it relates to compliance with A.A.C. R18-2-721 and Condition III.A.2.a.(1).

Similarly, Attachment "C" of the Title V Permit indicates A.A.C. R18-2-721 applies to the "Primary Mill Feed Chute" (Equipment ID No. 22110-CH-00001) at the Taylor site, but again the "Primary Mill Feed Chute" is not identified as a source of particulate matter emissions in South32's application. Although the Title V Permit implies there are particulate matter emissions from this source, there is no explanation as to how A.A.C. R18-2-721 applies and how South32 will assure compliance with Condition III.A.2.a.(1).

Attachment "C" of the Title V Permit also indicates the "Primary Crusher" (Equipment ID No. CRUSH-1) at the Taylor site is subject to A.A.C. R18-2-721. While South32's application discloses potential particulate matter emissions from the "Primary Crusher," it is not clear from where the emissions are released for purposes of compliance. Again, the Title V Permit does not provide sufficient detail with which to understand how A.A.C. R18-2-721

applies and how South32 will assure compliance with Condition III.A.2.a.(1). Again, this inconsistency calls into question the enforceability of Condition III.A.2.a.(1).

Most concerning, however, is that Condition III.A.2.a(1) does not actually set forth the applicable particulate emission limits. Instead, the Condition simply incorporates R18-2-721.B and C, which requires applicable sources to establish maximum allowable hourly particulate matter emission limits using specific equations. As Petitioners stated in their comments, the Title V permit cannot simply restate these equations to establish applicable emission limits for sources subject to Condition III.A. Exhibit 1, Comments on Draft Title V Permit at 16.

ADEQ was required to identify which sources are subject to the applicable equations and do the math to establish applicable particulate matter limits in the Title V permit. It was not sufficient under Title V to simply reprint equations set forth in regulatory text without actually explaining how the regulations specifically apply. A Title V Permit must "include enforceable limitations and standards." 42 U.S.C. § 7661c(a). A permit cannot just refer to equations required to be utilized to establish enforceable limitations and standards. Fundamentally, the fact that the Title V Permit simply restates equations renders Condition III.A.2.a(1) unenforceable and contrary to Title V permitting requirements.

This is especially true given that it is not clear how the equations would actually apply to any piece of equipment or activity subject to Condition III.A.2.a(1). Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b) apply based on a source's "process weight rate." For example, Condition III.A.2.a(1)(b) explains that for sources having a "process weight rate greater than 60,000 pounds per hour (30 tons per hour) maximum allowable emissions shall be determined by the following equation: $E = 55.0P^{0.11}$," where E = the maximum particulate limit and P = the process weight rate. It is not clear what "process weight rate" refers to. As Petitioners questioned in their comments, "Does this refer to throughput capacity or actual throughput measurements? How is it even determined whether a source has a greater than 60,000 pounds per hour weight rate for purposes of determining applicability?" Exhibit 1, Comments on Draft Title V Permit at 16-17. Without an explanation as to what "process weight rate" actually refers to, it is not clear what the applicable particulate limit actually is.

The problem of a lack of specificity under Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b) is compounded by an erroneous definition of "process weight rate" in the Arizona SIP. A.A.C. R18-2-701(41) defines "process weight rate" as "a rate established pursuant to R18-2-702(E)." However, A.A.C. R18-2-702(E) relates to the process of ADEQ approving alternative opacity limits for applicable sources and does not speak to "process weight rate." It is actually A.A.C. R18-2-702(F) of the Arizona SIP that speaks to the meaning of "process weight rate," stating:

> For continuous or long run, steady-state process sources, the process weight rate is the total process weight for the entire period of continuous operation, or for a typical portion

> of that period, divided by the number of hours of the period, or portion of hours of that period.
>
> For cyclical or batch process sources, the process weight rate is the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during the period.

A.A.C. R18-2-702(F)(1) and (2). Here, the SIP makes clear that the "process weight rate" is not a constant, but rather a carefully calculated variable that depends on whether a source is "steady-state" or "cyclical" and on total process weight during appropriate activities and time periods. The Title V Permit does not even acknowledge A.A.C. R18-2-702(F) or attempt to establish any definition that is functionally equivalent.

Given that the correct definition of "process weight rate" under the Arizona SIP is source-specific, the Title V Permit must define "process weight rate" by source to ensure the enforceability of Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b). It does not. This means it is not possible, based on the Title V Permit and the TSD, to discern what the variable "*P*" under A.A.C. R18-2-721 actually means and what particulate matter limits actually apply. This further means Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b) are not enforceable as a practicable matter.

Furthermore, for applicable equipment that do not have mass throughput, it is not clear how this calculation even be calculated. Attachment "C" of the Title V Permit, for example, lists the "max. capacity" for the Paste Plant sources at the Taylor site, "Paste Plant Binder Silo 1" (Equipment ID No. DC-PPBS1), "Paste Plant Binder Silo 2" (Equipment ID No. DC-PPBS3), "Paste Plant Binder Silo 3" (Equipment ID No. DC-PPBS3), "Paste Plant Binder Silo 4" (Equipment ID No. DC-PPBS4), "Paste Plant Module 1 Mixer" (Equipment ID No. DC-PPM1M), and "Paste Plant Module 2 Mixer" (Equipment ID No. DC-PPM2M), which are subject to A.A.C. R18-2-721, in cubic feet per minute, a volumetric throughput.[7] Neither the Title V Permit nor the TSD set forth or reference any information or analysis indicating how specific volumetric throughput data is to be accurately converted to mass throughput for purposes of ensuring compliance with A.A.C. R18-2-721, Condition III.A.2.a.(1)(a), and Condition III.A.2.a.(1)(b).

Finally, while Condition III.A.2.b.(1) establishes a 20% opacity limit for the equipment or activities subject to Condition III.A, it is not clear how this limit would apply to the equipment or activities subject to III.A. Echoing the concerns stated above, it is troubling that the Title V Permit does not specifically identify the source of opacity for the equipment or activities subject to Condition III.A and does not identify where opacity readings must be taken in order to assure compliance with this quantitative limit. This Condition is not enforceable given the lack of detail

[7] Similarly, Attachment "C" also lists the "max. capacity" for the Paste Plant sources at the Clark site in cubic feet per minute.

about how it applies and how compliance is to be measured for the equipment or activities subject to Condition III.A.

Relatedly, while Condition III.A.2.b.(2) provides that if the presence of uncombined water is the only reason for an opacity exceedance, the exceedance shall not constitute a violation of the applicable opacity limit, the Title V Permit sets forth no monitoring of "uncombined water" that would assure compliance with the Condition. In order for this exemption to be legitimately applied in accordance with the Arizona SIP, the Title V Permit must set forth sufficient monitoring of "uncombined water" in order to verify the presence of "uncombined water" and its contribution to any exceedance of the 20% opacity limit. Without monitoring, this exemption is not enforceable and does not assure compliance with applicable requirements.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear whether ADEQ responded to Petitioners' concerns over the applicability and enforceability of Condition III.A.2.a.(1) in its response to comments. There is no direct response to the concerns raised by Petitioners in their comments. Indirectly, ADEQ addresses a concern about "where the stacks will be located." Exhibit 2, Responsiveness Summary to Public Comments at 21. ADEQ responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." *Id*. While the Title V Permit indicates that some emissions sources subject to Condition III.A.2.a.(1) have emission exhaust points, it does not appear to comprehensively indicate which sources have stacks such that it is understood how A.A.C. R18-2-721 applies and how South32 will assure compliance with Condition III.A.2.a.(1). Regardless, this does not appear to be a meaningful response to significant comment.

It is further not clear whether ADEQ responded to Petitioners' comments regarding the enforceability of Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b). There is no direct response to the concerns raised by Petitioners in their comments regarding the definition of "process weight rate" and other enforceability concerns. ADEQ generally responded to Petitioners' comment regarding the equations set forth at Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b) stating, "The mathematical equations are part of the applicable regulations. These apply to all the emission sources subject to Condition III.A.2 of Attachment 'B'." Exhibit 2, Responsiveness Summary to Public Comments at 20. ADEQ is absolutely correct that the applicable mathematical equations at A.A.C. R18-2-721 apply, but without actually completing the equations to establish applicable limits, they are not enforceable as a practical matter as they relate to the specific applicable sources. Given that Title V permits "shall include enforceable emission limitations and standards," it cannot suffice to simply restate an equation, particularly ones that rely on specific variables that vary based on type of source and activity rates. ADEQ does not otherwise respond to concerns that applicable emission points have volumetric, rather than mass-based, throughput, making Condition III.A.2.a.(1)(a) and Condition III.A.2.a.(1)(b) unenforceable as it relates to these sources.

With regards to Petitioners' comments regarding the enforceability of the opacity limit at Condition III.A.2.b, is not clear whether ADEQ responded to concerns over the applicability and enforceability of Condition III.A.2.b.(1) in its response to comments. There is no direct response to the concerns raised by Petitioners in their comments. Indirectly, ADEQ addresses a concern about "where the stacks will be located." Exhibit 2, Responsiveness Summary to Public Comments at 21. ADEQ responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." *Id.* While the Title V Permit indicates that some emissions sources subject to Condition III.A.2.b.(1) have emission exhaust points, it does not appear to comprehensively indicate which sources have stacks such that it is understood how A.A.C. R18-2-721 applies and how South32 will assure compliance with the opacity limit at Condition III.A.2.b.(1).

Finally, with regards to comments over sufficient monitoring of "uncombined water" and compliance with Condition III.A.2.b.(2), ADEQ addressed initial concerns expressed by Petitioners regarding the definition of "uncombined water," but did not otherwise address Petitioners' concerns regarding a lack of monitoring. ADEQ states:

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

Exhibit 2, Responsiveness Summary to Public Comments at 17. While it was helpful for ADEQ to identify the specific definition of "uncombined water," the agency did not otherwise address whether the Title V Permit provides sufficient periodic monitoring of "uncombined water" such that Condition III.A.2.b.(2) can be appropriately applied and enforced.

2) The Administrator Must Object

Condition III.A.2 is unenforceable as a practical matter given that the Title V Permit does provide sufficient detail and information from which to understand what emission units and activities are subject to the Condition and how they are subject to this Condition, fails to set forth specific particulate matter emission limits, and fails to ensure the enforceability of opacity limits. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards.

b) Attachment "B", Condition III.A.3.a

Condition III.A.3.a sets forth air pollution control requirements for 42 transfer points and drops subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Of primary concern is while the Condition South32 to utilize emission control practices in order to minimize particulate matter emissions, the Condition states that South32 shall do so only "to the extent practicable." Specifically, the Condition states that South 32 "shall, to the extent practicable, utilize wet suppression on the following units to minimize particulate matter emissions and comply with the applicable limitations and standards of Condition III.A.2 above." The phrase "to the extent practicable" is ambiguous and not defined. Indeed, neither the identified underlying authority for Condition III.A.3.a, namely the A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(a), nor the Arizona SIP define "to the extent practicable." This lack of definition is problematic as it suggests there are no clear means of assessing whether South32 is or is not in compliance with Condition III.A.3.a, making the Condition unenforceable.

A lack of specific definition is especially problematic because the phrase "to the extent practicable" is understood to qualify an action as discretionary in nature. The term "practicable" is understood to also mean "feasible," meaning an action that must be undertaken "to the extent practicable" must only be undertaken to the extent it happens to be feasible. Courts have noted the phrase conveys complete discretion. *See e.g., Cope v. Scott*, 45 F.3d 445 (D.C. Cir. 1995) and *Oceana, Inc. v. Locke*, 670 F.3d 1238 (D.C. Cir. 2011). The U.S. Court of Appeals for the D.C. Circuit has described the phrase as "the essence of discretion." *Cope v. Scott*, 45 F.3d 445, 450. Thus, inclusion of the phrase "to the extent practicable" makes compliance completely discretionary. As Petitioners noted in their comments, the inclusion of the phrase means that "South32 could decide that wet suppression is not practicable 100% of the time." Exhibit 1, Comments on Draft Title V Permit at 17. This means Condition III.A.3.a is completely unenforceable and cannot serve to limit particulate emissions and ensure compliance with the applicable limits at Condition III.A.2.

Although Condition III.A.3.a states that "to the extent practicable" does not include adding water such that controlled material adheres to conveyor belts or feeders or clogs transfer points, this does not provide any additional clarity. This simply means that South32 is not required to utilize wet suppression to the extent that it gums up machinery. However, the Condition still affords discretion for South32 to not utilize wet suppression at all.

Even if the phrase "to the extent practicable" could be defined so as to establish enforceable sideboards, its inclusion in the Title V Permit is fundamentally contrary to applicable requirements. The Arizona SIP at R18-2-721 does not contain the phrase "to the extent practicable." Further, the authorities cited for Condition III.A.3.a—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(a)—also do not include or reference the phrase. Its discretionary inclusion in Condition III.A.3.a of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

Another problem rendering Condition II.A.3.a unenforceable is that it is not clear what "wet suppression" refers to. The Title V Permit lists some "options" for wet suppression, including "water sprays, surfactant use, water jets, foggers, inherent moisture content (including moisture from upstream water sprays), or other equivalent control methods." However, the Title V Permit does not actually require that any specific option be utilized or achieve any level of control efficiency. Further, to the extent that "other equivalent control methods" are used, it is not clear what the term "equivalent" means in this context and whether it refers to control

efficiency or other means of measuring "equivalency." Fundamentally, the Title V Permit does not explicitly state what wet suppression means such that this control standard, including utilization of the various "options," is remotely enforceable. This means Condition III.A.3.a is further unenforceable and cannot serve to limit particulate emissions and ensure compliance with the applicable limits at Condition III.A.2.

With regard to the units where wet suppression is required, it is also not clear how wet suppression is to be utilized such that particulate matter emissions and opacity will be limited. Conditions III.A.3.a(1)-(42) lists the "emission units" where wet suppression must be utilized, but the Title V Permit does not provide any detail explaining where the emission units are even located, how wet suppression is to be utilized at these emission units, and where specifically at the emission unit wet suppression must be utilized. For example, Condition III.A.3.a(8) identifies "Transfer of Development Ore Mined from Shaft Loadout Conveyor to Measurement Flask (Process #DP-55)." Process #DP-55 is not even specifically defined in the Title V Permit and it is not clear where this transfer unit is located or how it functions. The terms "Shaft Loadout Conveyor" and "Measurement Flask" are also not defined and it is not possible to understand what these pieces of equipment are, how they function, and how wet suppression is to be utilized with regards to their operation. Another example is Condition III.A.3.a(26), which identifies "Transfer of Stope Ore from Transfer Conveyor to Reversing Conveyor (Process #DP-77)." Process #DP-77 is not specifically defined in the Title V Permit and it is not clear where this transfer unit is located or how it functions. The terms "Transfer Conveyor" and "Reversing Conveyor" are also not defined and it is not possible to understand what these pieces of equipment are, how they function, and how wet suppression is to be utilized with regards to their operation.

The lack of specificity around the term "wet suppression" and what it means, where it is to be utilized, how it is to be utilized, and to what effect is extremely concerning given that South32's application indicates "wet suppression" is intended to achieve a high level of control of particulate matter.

For the 42 sources listed under Conditions III.A.3.a(1)-(42), South32 presumes a particulate matter control efficiency of up to 96.25%. For example, South32's application assumes a 96.25% particulate matter control efficiency for DP-40—DP-43, DP-49, DP-54—DP-65, and DP-70—DP-81. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 35-36. South32 assumes a 94% particulate matter control efficiency for DP-124—DP-127, DP-129—DP-132, and DP-134—DP-137. *See Id.* Appendix A at 44. Although individual sources may have relatively low potential particulate matter emissions, cumulatively, all sources at the Hermosa Mine must achieve assumed control efficiencies in order to sustain the facility's classification as a synthetic minor source. South32's application, for example, assumes that all drops associated with the Taylor site cumulatively have the potential to emit 19.63 tons of non-fugitive particulate matter based on assumed control efficiencies. *See Id.* Appendix A at 41-42. If uncontrolled, these sources have the potential to emit 86.91 tons of non-fugitive particulate matter, meaning South32 assumes an overall 88% reduction in particulate matter through the use of controls, including wet suppression. *Id*.

To achieve the overall level of emission control assumed by South32 and to sustain ADEQ's claim that the Hermosa Mine is a synthetic minor source for PSD permitting purposes, all individual sources of emissions must achieve the control efficiencies presumed by South32 in its application. This means the Title V Permit must set forth clear and enforceable standards to ensure "wet suppression" is effectively utilized in a manner that is understood, enforceable, and that assures compliance. The Title V Permit does not, meaning it fails to assure compliance with applicable requirements.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.a, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.a. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.a of the Title V Permit appropriate or justified.[8]

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.a will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to Petitioners' concerns over the "wet suppression" requirements of Condition III.A.3.a, ADEQ responded:

> Condition III.A.3 of Attachment "B" states that wet suppression should be applied "at all times". It also states that it *"does not require addition of water to the extent that the*

[8] ADEQ did not specifically identify where the phrase "to the extent practicable" makes an appearance in state and federal regulations or explain the context in which it appears. To the extent the phrase makes an appearance, it often has no relation to emission control requirements. For instance, A.A.C. R18-2-325(I)(1) uses the phrase "to the extent practicable," but it is in the context of conducting expedited reviews of permit applications.

controlled material adheres to conveyor belts or feeders or clogs transfer points". This means wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points. It should be noted that such language has been placed in several mining permits and has been successfully enforced by the Department.

Exhibit 2, Responsiveness Summary to Public Comments at 20. This response did not directly address Petitioners' specific concerns. Although ADEQ stated that, "wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points," this does not provide any clarity as to what the term "wet suppression" specifically refers to, where it is specifically to be utilized, how it is specifically to be utilized, and to what effect. The statement that, "such language has been placed in several mining permits and has been successfully enforced by the Department" does not address whether the language in the Hermosa Mine Title V Permit is enforceable for purposes of compliance with applicable requirements and Title V of the Clean Air Act. While the Department may somehow be capable of enforcing vague and ambiguous environmental standards at times, this does not mean that Condition III.A.3.a is enforceable as a practical matter.

2) The Administrator Must Object

Condition III.A.3.a is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

c) Attachment "B", Condition III.A.3.b

Condition III.A.3.b sets forth air pollution control requirements for two drops subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.A.3.b sets forth a similar "wet suppression" standard as Condition III.A.3.a, but requires that "wet suppression" be utilized to "minimize particulate matter emissions and keep the processes completely wet and saturated" in order to comply with Condition III.A.2. Unfortunately, as with Condition III.A.3.a, Condition III.A.3.b also qualifies the requirement to utilize "wet suppression" with the phrase "to the extent practicable." As explained in detail above, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.A.3.b unenforceable as a practical matter.

Further, the authorities cited for Condition III.A.3.b—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(a)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.A.3.b of the Title V Permit therefore

undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not define what "wet suppression" entails such that it is understood how it is to be "utilized" in order to comply. The Condition states that South32 must "keep the processes completely wet and saturated," but it does not explain what the "processes" are or how South32 is to monitor moisture content such that it will ensure this standard is met. In its application, South32 assumes compliance with Condition III.A.3.b will achieve 100% emission control at all times from emission units DP-19 and DP-20. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 35. To assure compliance with this exceptionally high control efficiency, the Title V Permit must provide more specificity to ensure "wet suppression" is effectively utilized at all times to control emissions.

Finally, with regards to the emission units subject to Condition III.A.3.b, the Title V Permit is similarly ambiguous. Conditions III.A.3.b(1) and (2) identifies "Drop from 22110-ML-00001 Primary Mill to 22110-SN-00002 Primary Mill Discharge Screen (Process #DP-19)" and "Drop from 22110-SN-00002 Primary Mill Discharge Screen to 22210-CV-00002 Primary Screen Discharge Conveyor (Process #DP-20)." Again, processes DP-19 and DP-20 are not defined and the Title V permit provides no details regarding these emission units such that it can possibly be understood how wet suppression is to be applied effectively in order to control particulate matter emissions from DP-19 and DP-20.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.b, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.b. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.b of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from

a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.b will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to Petitioners' concerns over the "wet suppression" requirements of Condition III.A.3.b, ADEQ responded:

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

Exhibit 2, Responsiveness Summary to Public Comments at 20. This response did not directly address Petitioners' specific concerns over Condition III.A.3.b. Although ADEQ stated that, "wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points," this does not provide any clarity as to what the term "wet suppression" specifically refers to in the context of Condition III.A.3.b, where it is specifically to be utilized, how it is specifically to be utilized, and to what effect. The statement that, "such language has been placed in several mining permits and has been successfully enforced by the Department" does not address whether the language in the Hermosa Mine Title V Permit is enforceable for purposes of compliance with applicable requirements and Title V of the Clean Air Act. While ADEQ may somehow be capable of enforcing vague and ambiguous environmental standards at times, this does not mean that Condition III.A.3.b is enforceable as a practical matter.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding how wet suppression is to be applied effectively in order to control particulate matter emissions from DP-19 and DP-20.

2) The Administrator Must Object

Condition III.A.3.b is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

d) Attachment "B", Condition III.A.3.c

Condition III.A.3.c sets forth air pollution control requirements for three drops subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.A.3.c states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-006 Silo Discharge Dust Collection System (DC-6), and to the extent practicable, to control the particulate matter emissions from the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Silo Discharge Dust Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.A.3.c unenforceable as a practical matter.

Further, the authorities cited for Condition III.A.3.c—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.A.3.c of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21300-DCD-006 Silo Discharge Dust Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.A.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Silo Discharge Collection System consistent with Conditions III.A.2 and III.A.3.c. A lack of specificity around how the 21300-DCD-006 Silo Discharge Dust Collection System is to be installed, maintained, and operated renders Condition III.A.3.c unenforceable as a practical matter.

The Condition also provides no details on the "processes" from which the Dust Collection System will control particulate matter emissions. Conditions III.A.3.c(1)-(3) identify the "processes" subject to III.A.3.c, including DP-15, DP-16, and DP-17, but again the Title V Permit provides no details that would enable any understanding of the processes and how the Dust Collection System will control particulate matter.

For example, Condition III.A.3.c(2) identifies the "Drop from 21700-SCB-004 Discharge Feeder Belt Scale No. 2 to 21700-CVR-008 Primary Mill Feed Conveyor (Process #DP-16)," but process DP-16 is not defined and the Title V Permit does not explain where the discharge feeder

belt scale no. 2 or the primary mill feed conveyor are located, how they function, and how the 21300-DCD-006 Silo Discharge Dust Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from this drop. Without more specificity, it is unclear how Condition III.A.3.c is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.c, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.c. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.c of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.c will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to concerns over the how the 21300-DCD-006 Silo Discharge Dust Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.A.3.c. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-006 Silo Discharge Dust Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.[9]

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "processes" from which the Dust Collection System will control particulate matter emissions.

2) The Administrator Must Object

Condition III.A.3.c is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

e) Attachment "B", Condition III.A.3.d

Condition III.A.3.d sets forth air pollution control requirements for two dust collection systems subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.A.3.d states that South32 must "[a]t all times [] install, maintain, and operate the Coarse Ore Dust Collection System, 23100-FAN-0001 (DC-7) and Coarse Ore Dust Collection System, 23100-FAN-0002 (DC-8), and to the extent practicable, to control the particulate matter emissions from the Crusher at the Clark site." To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Dust Collection Systems to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.A.3.d unenforceable as a practical matter.

[9] Further, ADEQ's response indicates that requirements in the Title V Permit related to "manufacturer's specifications and O&M plans" are not federally enforceable. As ADEQ discloses, South32 will not be required to submit or otherwise report any "manufacturer's specifications and O&M plans." Rather, as ADEQ notes, "manufacturer's specifications and O&M plans" will only be accessed and checked via ADEQ inspections. This means that citizens will be unable to access any "manufacturer's specifications and O&M plans" that may be necessary to determine compliance and potentially take enforcement action pursuant to the Clean Air Act's citizen suit provision.

Further, the authorities cited for Condition III.A.3.c—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.A.3.d of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the Coarse Ore Dust Collection Systems are to be "install[ed], maintain[ed], and operate[d]" such that they achieve a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.A.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Dust Collection Systems consistent with Conditions III.A.2 and III.A.3.cd A lack of specificity around how the Coarse Ore Dust Collection Systems are to be installed, maintained, and operated renders Condition III.A.3.d unenforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.d, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.d. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.d of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.d will only allow South32 to renege on commitments to control air pollution at all times.

The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to concerns over the how the 21300-DCD-006 Silo Discharge Dust Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.A.3.d. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-006 Silo Discharge Dust Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

2) The Administrator Must Object

Condition III.A.3.d is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

f) Attachment "B", Condition III.A.3.e

Condition III.A.3.e sets forth air pollution control requirements for three dust collection systems subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.A.3.e states that South32 must "[a]t all times [], to the extent practicable, maintain, and operate 21300-DCD-006 Silo Discharge Dust Collection System (DC-6), Coarse Ore Dust Collection System, 23100-FAN-0001 (DC-7), and Coarse Ore Dust Collection System, 23100-FAN-0002 (DC-8) in a manner consistent with good air pollution control practices for minimizing particulate matter emissions." This Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Dust Collection Systems to control particulate matter emissions. As explained in

detail above in relation to Condition III.A.3.a, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.A.3.e unenforceable as a practical matter.

Further, the authorities cited for Condition III.A.3.c—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.A.3.e of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.e, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.e. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.e of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.e will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

2) The Administrator Must Object

Condition III.A.3.e is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or

otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

g) Attachment "B", Condition III.A.3.g

Condition III.A.3.g sets forth air pollution control requirements for 12 dust collection systems subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.A.3.g states that South32 must "[a]t all times [], to the extent practicable, maintain, and operate DC-PPBS1, DC-CPPBS1, DC-PPBS2, DC-CPPBS2, DC-PPBS3, DC-CPPBS3, DC-PPBS4, DC-CPPBS4, DC-PPM1M, DC-CPPM1M, DC-PPM2M, and DC-PPM2M, in a manner consistent with good air pollution control practices for minimizing particulate matter emissions." This Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Dust Collection Systems to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.A.3.g unenforceable as a practical matter.

Further, the authorities cited for Condition III.A.3.c—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.A.3.g of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.g, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.g. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.g of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining

industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.g will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

2) The Administrator Must Object

Condition III.A.3.g is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

h) Attachment "B", Conditions III.A.3.h-m

Conditions III.A.3.h-m set forth air pollution control requirements for a number of dust collectors subject to A.A.C. R18-2-721, yet the conditions are not enforceable as a practical matter.

Conditions III.A.3.h-m variously require South32 to at all times "install, maintain, and operate" dust collectors to control particulate matter emissions from Paste Plant Binder Silos 1-4 and Paste Plant Module Mixers 1-2. Unfortunately, these Conditions require particulate matter control only "to the extent practicable," meaning they effectively allow South32 to forego utilizing the dust collectors to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Conditions III.A.3.h-m unenforceable as a practical matter.

Further, the authorities cited for Conditions III.A.3.h-m—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The Arizona SIP at R18-2-721 also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Conditions III.A.3.h-m of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

Compounding the unenforceability of Conditions III.A.3.h-m, the Conditions also set forth no operational limitations or requirements to ensure the dust collectors are operated and maintained effectively at all times and effectively control particulate matter emissions from Paste

Plant Binder Silos 1-4 and Paste Plant Module Mixers 1-2. Title V Permits must set forth emission limitations and standards, "including those operational requirement and limitations that assure compliance with all applicable requirements at the time of permit issuance." 40 C.F.R. § 70.6(a)(1).

The Title V Permit cites A.A.C. R18-2-306.01.A as authority for these Conditions. A.A.C. R18-2-306.01 states that emissions limits must be "enforceable as a practical matter," which means "that specific means to assess compliance with an emission limitation, control, or other requirement are provided for in the permit in a manner that allows compliance to be readily determined by an inspection of records and reports." Here, the Title V Permit does not provide specific means to assess compliance with Conditions III.A.3.h-m as it contains no operational limitations or requirements setting forth how the dust collectors must be installed, operated, and maintained such that they effectively control particulate matter emissions.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Conditions III.A.3.h-m ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Conditions III.A.3.h-m. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Conditions III.A.3.h-m of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Conditions III.A.3.h-m will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to Petitioners' concerns over a lack of operational limitations and requirements in Conditions III.A.3.h-m, ADEQ did not directly respond. ADEQ did respond to

general concerns that the Title V Permit "does not establish sufficient operational limitations and requirements," but in its response to comments, it does not indicate that this was specifically in response to Petitioners' comments. In any case, ADEQ stated, "ADEQ disagrees with this. The permit does establish sufficient and stringent operational limitations and requirements." Exhibit 2, Responsiveness Summary to Public Comments at 31. It is unclear how ADEQ reached this conclusion. Conditions III.A.3.h-m set forth no specific operational limitations or requirements, simply stating that the dust collectors must be installed, maintained, and operated "to control particulate matter emissions." The Conditions set forth no detail as to how the dust collectors must be installed, maintained, and operated such that they effectively control particulate matter emissions to assure compliance with applicable limits and such that these Conditions can be enforced as a practical matter.

2) The Administrator Must Object

Conditions III.A.3.h-m are unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Conditions apply and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

i) Attachment "B", Conditions III.A.4

Condition III.A.4 purports to set forth monitoring, recordkeeping, and reporting requirements that are applicable to the emission sources subject to Conditions III.A.2 and III.A.3, but does not actually set forth sufficient periodic monitoring that assures compliance with Title V of the Clean Air Act.

Condition III.A.4.a requires South32 to "record the daily process rates and hours of operation of all material handling facilities." It is first not clear what methodology and/or equipment will be used to reliably and accurately measure "daily process rates" such that compliance can be assessed. The Title V Permit simply states that South32 will "record" daily process rates, but does not explain how the company will do so in order to yield accurate data. Further, it is not clear what the phrase "daily process rates" actually refers to. As explained above, the applicable particulate matter limits forth at Condition III.A.2.a rely on measurements of "process weight rate," which according to the Arizona SIP requires source-specific calculations. Condition III.A.4.a does not appear to require monitoring of "process weight rate" consistent with the Arizona SIP and the applicable limits at Condition III.A.2.a.

Condition III.A.4.b requires weekly opacity monitoring in accordance with Condition II.B for all units subject to Condition III.A. Condition II.B, however, does not set forth sufficient periodic monitoring that assures continuous compliance with the applicable opacity limit of 20%. Because the Arizona SIP does not set forth specific opacity monitoring requirements for units subject to A.A.C. R18-2-721, ADEQ was required to establish opacity monitoring requirement sufficient to yield reliable data from the relevant time period that are representative of the

source's compliance with the Title V Permit. The Title V Permit does not include such sufficient periodic monitoring of opacity.

To begin with, Condition II.B.3.c only requires quantitative opacity monitoring if there is the "appearance" of opacity that is greater than the applicable standard. The word "appearance" is an extremely subjective term and provides no meaningful or enforceable standard for requiring quantitative opacity monitoring. It is not clear who or what is "observing," whether that person (or thing, as the case may be) is qualified to "observe," from what location, or what specific qualitative parameters are actually being observed such that the "appearance" of opacity can be accurately gauged. Emissions could "appear" to exceed the applicable standard for one observer, yet the same emissions could "appear" not to exceed the applicable standard for another observer. While the Title V Permit cannot rely on qualitative monitoring to demonstrate compliance with the applicable quantitative 20% opacity limit, in this case the Title V Permit allows South32 to completely forego quantitative monitoring of opacity on the basis of qualitative observations of the "appearance" of opacity. This is not sufficient periodic monitoring.

Further, to the extent that quantitative monitoring may occur, it must be conducted by an "EPA Reference Method 9 certified observer," but the Title V Permit at Condition II.B.2 does not require a certified observer to be on site, only "on call." This clearly suggests that certified observers are likely to not be on site in the event of visible emissions requiring Method 9 observations, meaning it is likely not possible to conduct the "immediate" observation required by Condition II.B.3.c. Given that compliance with the 20% opacity limits relies entirely on observations by certified Method 9 observers, the Title V Permit cannot rely on "on call" observers who are not on-site to conduct the required "immediate" observations to determine compliance.

Beyond the adequacy of Condition II.B.2, Petitioners' also flagged issues with Condition III.A.4.b, namely related to the frequency of monitoring and the location of any opacity monitoring.

With regards to frequency, it is not clear how weekly observations of visible emissions required by Condition III.A.4.b represents sufficiently periodic monitoring. Given that the emission units and processes subject to the applicable opacity standard, which applies at all times, are involved in the processing of raw materials in a heavy industrial setting, emissions are likely to be variable and equipment and processes could be subject to very regular variations that could affect performance. This is especially true given that the units and processes subject to the applicable opacity standard at Condition III.A.2 rely entirely on the effective and continuous utilization of various emission controls, inclusion "wet suppression" and "dust collectors," to assure compliance. Especially given that South32 presumes high control efficiencies for a number of emissions sources, it would appear that more frequent opacity monitoring is necessary. For example, South32 presumes emissions will be controlled from units DP-124—DP-127, DP-129—DP-132, and DP-134—DP-137 by at least 94% utilizing wet suppression at all times. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 46. To

assure operations are maintained at this high level of performance, the Title V Permit should require more frequent opacity monitoring.

In general, the EPA has described five factors that should be relied upon in determining appropriate monitoring under Title V, including:

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

In the Matter of CITGO Refining and Chemicals Company, L.P., Order on Petition No. VI-2007-01 at 7-8 (May 28, 2009). ADEQ did not specifically address these five factors or otherwise provide a rationale for the selected monitoring frequency in the TSD for the Title V Permit. However, based on EPA's direction, it would appear that more frequent opacity monitoring is not only justified, but necessary. Given that the emission units and processes subject to the opacity standard at Condition III.A.2 are likely to experience variability, both in terms of rate of materials processed and composition of materials processed, and rely heavily on control systems to limit emissions and rely heavily on effective maintenance and operation of add-on controls, such as dust collectors, it is critical to assure sufficiently frequent monitoring that ensures compliance with the applicable opacity limit. It is not clear that weekly monitoring is sufficiently frequent.

With regards to the location of opacity monitoring, it is not clear where weekly observations are to occur in relation to the emission sources subject to Condition III.A. Condition III.A.4.b states that for "underground units, compliance with the opacity limit shall be determined at the vent raise, shaft, or decline." This Condition provides no clarity as to where observations are to take place for underground units. South32 could observe opacity at the "vent raise," but could also choose to observe opacity at the "shaft" or "decline." The Title V Permit must specify exactly where opacity observations are to take place in order to assure sufficient monitoring and compliance, and cannot simply list potential "options." This is especially necessary in relation to Condition III.A.4.b as it is not even clear what the "vent raise, shaft, or decline" are, where they are located, and whether they are configured and operated such that monitoring would yield reliable opacity data. Attachment "C" of the Title V Permit does not identify any "vent raise, shaft, or decline" as sources of emissions, making it impossible to understand what Condition III.A.4.b is referring to. Given this, it is not clear how opacity monitoring will occur such that it demonstrates compliance in relation to the sources subject to Condition III.A.

Finally, and relatedly, Condition III.A.4 fails to require sufficient periodic monitoring of "wet suppression" utilization such that it assures that particulate matter emissions will be limited to comply with applicable limits, including the 20% opacity limit set forth at Condition III.A.2. "Wet suppression" is required to be utilized by Conditions III.A.3.a and III.A.3.b in order to control particulate matter emissions from a number of emission sources. According to South32's application, the use of "watering," which is presumed to mean "wet suppression," is expected to

achieve a particulate matter control efficiency from subject emissions sources by up to 96.25%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41-42, 48.[10]

Unfortunately, Condition III.A.4 does not require any quantitative monitoring of "wet suppression" control efficiency that would assure compliance with assumed control efficiencies. Further, Condition III.A.4 does not even require any qualitative monitoring to assure that "wet suppression" is actually utilized to any degree as required by Conditions III.A.3.a and III.A.3.b. With no monitoring of wet suppression utilization, let alone any quantitative monitoring of the actual effectiveness of any wet suppression utilization, the Title V Permit does not assure compliance with applicable particulate matter limits, including the applicable 20% opacity limit, and does not limit the Hermosa Mine's potential to emit as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear that ADEQ fully responded to Petitioner's concerns regarding Condition III.A.4 and whether it sets forth sufficient periodic monitoring that assures compliance with applicable limits and Title V of the Clean Air Act.

With regards to Petitioners' specific comments regarding Condition III.A.4, there does not appear to be any direct response. There does not appear to be a response to comments raising concerns over the meaning of the term "process rate" as set forth in Condition III.A.4.a. The agency responded generally to concerns over a lack of definitions in the Title V Permit. *See* Exhibit 2, Responsiveness Summary to Public Comments at 13. However, this generic response sheds no light as to what "process rate" means in terms of the monitoring required by Condition III.A.4.a.

With regards to comments over whether Condition II.B.2.c requires sufficient periodic monitoring of opacity, ADEQ responded generally to Petitioners' concerns, stating:

> Condition II.B of Attachment "B" requires the facility to conduct instantaneous surveys or six-minute observations by a certified observer. At the frequency specified in the proposed air quality permit, the facility is expected to conduct instantaneous surveys. If visible emissions are observed and evaluated against the applicable opacity standard, the result must be documented. If an opacity standard is exceeded, the facility must "adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard". The Department believes these conditions are appropriate and abide by applicable regulatory requirements.

This response does not address Petitioners' concerns that the Title V Permit actually allows South32 to forego quantitative opacity monitoring on the basis of the qualitative "appearance" of opacity being less than the quantitative standard. This response does not address concerns that

[10] Specifically, the use of "wet suppression," or "watering" as is stated in South32's application, for the emission sources subject to Conditions III.A.3.a and III.A.3.b is assumed to achieve particulate matter emission control efficiencies as follows: DP-18, 85%; DP-41—DP-43, 96.25%; DP-49, 96.25%; DP-54—DP-65, 96.25%; DP-70—DP-81, 96.25%; DP-124—DP-127, 94%; DP-129—DP-132, 94%; DP-134—DP-137, 94%; and DP-19—DP-20, 100%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41-42, 48.

the term "appearance" is ambiguous and unenforceable and that while "instantaneous surveys" of the "appearance" of opacity may be required, such surveys do not assure compliance with the applicable 20% limit, which can only be determined via Method 9 observations. ADEQ also did not respond to Petitioners' concerns that a certified Method 9 observer does not have to be on site, but rather only "on call." Overall, ADEQ does not respond to Petitioners' concerns that Condition II.B.2 does not set forth sufficient periodic monitoring of opacity such that it assures compliance with the applicable limit at Condition III.A.2.b.

ADEQ appears to have indirectly responded to Petitioners' concerns over the frequency of opacity monitoring under Condition III.A.4.b. Responding to a comment regarding Condition III.B.5.f that weekly opacity monitoring was too infrequent, ADEQ responded:

> ADEQ disagrees with this comment. Weekly opacity monitoring has been successfully employed in a number of mining permits. ADEQ has determined that the use of the weekly monitoring, periodic performance testing and the general duty obligation to follow manufacturer specifications and good air pollution practices will serve as reasonable requirements to ensure optimal performance and to track ongoing compliance.

Exhibit 2, Responsiveness Summary to Public Comments at 22. Here, it is first unclear how ADEQ determined that weekly opacity monitoring "has been successfully employed in a number of mining permits." ADEQ cites to no specific permits or examples or explains what it means by "successfully employed." ADEQ appears to argue that, taken together with other requirements, including testing and other general obligations, weekly monitoring will ensure "optimal performance and track ongoing compliance." However, the Title V Permit sets forth no testing requirements for the emission sources subject to Condition III.A.3. Further, to the extent that South32 must comply with general obligation to control emissions, as explained, the duty only applies "to the extent practicable." Regardless, an obligation to control emissions is not a substitute for sufficient periodic monitoring under Title V of the Clean Air Act.

ADEQ does not appear to have responded to Petitioners' comments regarding where opacity monitoring is to take place, particularly in relation to underground sources. ADEQ does respond to a general comment regarding "where the stacks will be located" and responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides no insight as to what the "vent raise, shaft, or decline" are, where they are located, and how opacity will be measured from one or more of these sources in order to assure compliance.

ADEQ does not appear to have responded to Petitioners' comments regarding monitoring of "wet suppression utilization." The agency responds generally to comments that the permit does not include "monitoring, recordkeeping and reporting requirements to ensure compliance with generic standards like opacity standards," stating:

> Generic standards are tied to monitoring, recordkeeping and reporting requirements in the proposed air quality permit. For example, the opacity of any plume or effluent from metallic processing operations should not exceed 20 percent. If visible emissions exceed this opacity standard, the facility is expected to follow monitoring, recordkeeping and

> reporting requirements in Condition II.B.3 of Attachment "B". Therefore, the draft permit offers an appropriate methodology for addressing generic standards like opacity standards.

Exhibit 2, Responsiveness Summary to Public Comments at 15. While it is not clear whether this response is completely on point, it appears to speak to concerns that the Title V Permit fails to assure monitoring of the generic requirement to utilize "wet suppression" for a number of emission sources. ADEQ's response appears to indicate the agency generically believes that the Title V Permit "offers an appropriate methodology for addressing generic standards like opacity standards." Unfortunately, with regards to "wet suppression" utilization, the Title V Permit offers no methodologies for monitoring compliance, either qualitatively or quantitatively.

2) The Administrator Must Object

Condition III.A.4 fails to set forth sufficient periodic monitoring to assure compliance with applicable limits set forth at Condition III.A.2 and applicable requirements. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring to assure compliance with applicable emission limitations and standards.

j) Attachment "B", Conditions III.A.5

Condition III.A.5 sets forth specific PM_{10} emission limits for dust collection systems DC-6, DC-7, and DC-8. Unfortunately, these limits do not appear to be enforceable as a practical matter.

Of primary concern is that while Conditions III.A.5.a and III.A.5.b appear to establish PM_{10} emission limits for DC-6, DC-7, and DC-8, these same units are only required to control particulate matter emissions "to the extent practicable." As explained above, Conditions III.A.3.c and III.A.3.e of the Title V Permit only require that unit DC-6 control particulate matter emissions "to the extent practicable." Similarly, Conditions III.A.3.d and III.A.3.e only require that units DC-7 and DC-8 control particulate matter emissions "to the extent practicable."

Read together with Conditions III.A.3.c, III.A.3.d, and III.A.3.e, this raises two key concerns.

First, that although Conditions III.A.5.a, and III.A.5.b impose PM_{10} emission limits for DC-6, DC-7, and DC-8, these limits are sham limits because the dust collector units may not even be capturing and controlling particulate matter emissions from underlying emission units and processes. For example, if DC-6 is not capturing and controlling particulate matter emissions from DP-15, DP-16, and DP-17 as required by Condition III.A.3.c because it is not "practicable," then DC-6 may have little to no particulate emissions, rendering the PM_{10} limit at Condition III.A.5.a meaningless and unenforceable.

Second, inclusion of the phrase "to the extent practicable" with regards to the control of particulate matter emissions from DC-6, DC-7, and DC-8 in Conditions III.A.3.c, III.A.3.d, and III.A.3.e raises concerns that South32 may be allowed to exceed the PM_{10} limits set forth at Conditions III.A.5.a and III.A.5.b if it is not practicable to maintain and operate the units in a manner that effectively controls particulate emissions. Put simply, while Conditions III.A.5.a and III.A.5.b appear to establish strict PM_{10} emissions limits, Conditions III.A.3.c, III.A.3.d, and III.A.3.e appear to allow compliance only "to the extent practicable."

In either case, the Title V Permit is not clear how Conditions III.A.5.a and III.A.5.b relate to Conditions III.A.3.c, III.A.3.d, and III.A.3.e and how inclusion of the phrase "to the extent practicable" affects the enforceability of the applicable PM_{10} emissions limits. This continues to underscore that inclusion of the phrase "to the extent practicable" throughout the Title V Permit undermines the clarity and enforceability of applicable emission limits and the Hermosa Mine's potential to emit.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ did not respond directly to Petitioners' comments regarding the enforceability of Conditions III.A.5.a and III.A.5.b. However, ADEQ responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if the enforceability of applicable limits are undermined by the phrase "to the extent practicable," then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Conditions III.A.5.a and III.A.5.b.

2) The Administrator Must Object

Condition III.A.5 is unenforceable as a practical matter and contrary to applicable requirements given the applicable particulate matter limits appear qualified by the phrase "to the extent practicable" found in applicable Conditions at III.A.3. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

3. Attachment "B", Condition III.B

This Condition establishes general limitations for equipment and operations associated with metallic mineral processing operations, or equipment and operations subject to NSPS requirements for metallic minerals processing plant affected facilities at 40 C.F.R. § 60 Subpart LL. Unfortunately, the Condition does not set forth sufficiently specific limits and sufficient periodic monitoring such that the operational and other emission limitations assure compliance and are enforceable as a practical matter. Petitioners raised concerns with the following

provisions of Attachment "B" Condition III.B with reasonable specificity on pages 22-30 of their technical comments.

a) Attachment "B", Condition III.B.4.a

Condition III.B.4.a sets forth air pollution control requirements for 13 transfer points and drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Of primary concern is while the Condition South32 to utilize emission control practices in order to minimize particulate matter emissions, the Condition states that South32 shall do so only "to the extent practicable." Specifically, the Condition states that South 32 "shall, to the extent practicable, utilize wet suppression on the following units to minimize particulate matter emissions and comply with the applicable emission limitations and standards of Condition III.B.2 above." The phrase "to the extent practicable" is ambiguous and not defined. Indeed, neither the identified underlying authority for Condition III.B.4.a, namely A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e), nor the Arizona SIP define "to the extent practicable." This lack of definition is problematic as it suggests there are no clear means of assessing whether South32 is or is not in compliance with Condition III.B.4.a, making the Condition unenforceable.

A lack of specific definition is especially problematic because, as explained earlier, the phrase "to the extent practicable" is understood to qualify an action as discretionary in nature. Thus, inclusion of the phrase "to the extent practicable" makes compliance completely discretionary. This means Condition III.B.4.a is completely unenforceable and cannot serve to limit particulate emissions and ensure compliance with the applicable limits at Condition III.B.2.

Although Condition III.B.4.a states that "to the extent practicable" does not include adding water such that controlled material "adheres to conveyor belts or feeders or clogs transfer points," this does not provide any additional clarity. This simply means that South32 is not required to utilize wet suppression to the extent that it gums up machinery. However, the Condition still affords discretion for South32 to not utilize wet suppression at all.

Even if the phrase "to the extent practicable" could be defined so as to establish enforceable sideboards, its inclusion in the Title V Permit is fundamentally contrary to applicable requirements. While the NSPS general provisions at 40 C.F.R. § 60.11(d) contains the phrase "to the extent practicable" in relation to the duty to minimize emissions in relation to the operation and maintenance of any and all facilities subject to any NSPS, this provision simply sets forth a general duty and does not supplant source-specific requirements to limit emissions. Indeed, 40 C.F.R. § 60 Subpart LL nowhere contains the phrase "to the extent practicable" and nowhere references 40 C.F.R. § 60.11(d). Further, the authorities cited for Condition III.B.4.a—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(e)—also do not include or reference the phrase. Its discretionary inclusion in Condition III.B.4.a of the Title V Permit therefore

undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.[11]

Another problem rendering Condition III.B.4.a unenforceable is that it is not clear what "wet suppression" refers to. The Title V Permit lists some "options" for wet suppression, including "water sprays, surfactant use, water jets, foggers, inherent moisture content (including moisture from upstream water sprays), or other equivalent control methods." However, the Title V Permit does not actually require that any specific option be utilized or achieve any level of control efficiency. Further, to the extent that "other equivalent control methods" are used, it is not clear what the term "equivalent" means in this context and whether it refers to control efficiency or other means of measuring "equivalency." Fundamentally, the Title V Permit does not explicitly state what wet suppression means such that this control standard, including utilization of the various "options," is remotely enforceable. This means Condition III.B.4.a is further unenforceable and cannot serve to limit particulate emissions and ensure compliance with the applicable limits at Condition III.B.2.

With regard to the units where wet suppression is required, it is also not clear how wet suppression is to be utilized such that particulate matter emissions and opacity will be limited. Conditions III.B.4.a(1)-(13) lists the "emission units" where wet suppression must be utilized, but the Title V Permit does not provide any detail explaining where the emission units are even located, how wet suppression is to be utilized at these emission units, and where specifically at the emission unit wet suppression must be utilized. For example, Condition III.B.4.a(8) identifies "Drop from 22210-FE-00002 Pebble Crusher Product Return Feeder to 21710-CV-00001 Primary Mill Feed Conveyor (Process #DP-28)." Process DP-28 is not even specifically defined in the Title V Permit and it is not clear where this transfer unit is located or how it functions. The terms "Pebble Crusher Product Return Feeder" and "Primary Mill Feed Conveyor" are also not defined and it is not possible to understand what these pieces of equipment are, how they function, and how wet suppression is to be utilized with regards to their operation.

The lack of specificity around the term "wet suppression" and what it means, where it is to be utilized, how it is to be utilized, and to what effect is extremely concerning given that South32's application indicates "wet suppression" is intended to achieve a high level of control of particulate matter from the units subject to Condition III.B.4.a.

For all the 13 sources listed under Conditions III.B.4.a(1)-(13), South32 presumes a particulate matter control efficiency of 70%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41, 48. Although individual sources may have relatively low potential particulate matter emissions, cumulatively, all sources at the Hermosa Mine must achieve assumed control efficiencies in order to sustain the facility's classification as a synthetic

[11] Condition III.B.3 incorporates 40 C.F.R. § 60.11(d) as an overarching general duty applicable to emission source subject to the NSPS at the Hermosa Mine, which appears appropriate. However, it is inappropriate for this general duty to interfere with or undermine the enforceability of more specific applicable requirements, such as the requirements of Condition III.B.4.a. 40 C.F.R. § 60.11(d) is not a "get out of jail free" card, it is simply a requirement that while facilities subject to the NSPS must meet specific emission control requirements, they must also do the best they can to minimize air pollution.

minor source. South32's application, for example, assumes that all drops associated with the Taylor site cumulatively have the potential to emit 19.63 tons of non-fugitive particulate matter based on assumed control efficiencies. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41-42. If uncontrolled, these sources have the potential to emit 86.91 tons of non-fugitive particulate matter, meaning South32 assumes an overall 88% reduction in particulate matter through the use of controls, including wet suppression. *Id.*

To achieve the overall level of emission control assumed by South32 and to sustain ADEQ's claim that the Hermosa Mine is a synthetic minor source for PSD permitting purposes, all individual sources of emissions must achieve the control efficiencies presumed by South32 in its application. This means the Title V Permit must set forth clear and enforceable standards to ensure "wet suppression" is effectively utilized in a manner that is understood, enforceable, and that assures compliance. The Title V Permit does not, meaning it fails to assure compliance with applicable requirements.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.a, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id.*

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.a. As explained above, the phrase "to the extent practicable" makes an appearance in 40 C.F.R. § 60.11(d), but this is a general duty provision and does supplant the need for Condition III.B.4.a to be enforceable in order to assure compliance with the applicable limits at Condition III.B.2. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.a appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.a will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to Petitioners' concerns over the "wet suppression" requirements of Condition III.A.3.a, ADEQ responded:

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

Exhibit 2, Responsiveness Summary to Public Comments at 20. This response did not directly address Petitioners' specific concerns. Although ADEQ stated that, "wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points," this does not provide any clarity as to what the term "wet suppression" specifically refers to, where it is specifically to be utilized, how it is specifically to be utilized, and to what effect. The statement that, "such language has been placed in several mining permits and has been successfully enforced by the Department" does not address whether the language in the Hermosa Mine Title V Permit is enforceable for purposes of compliance with applicable requirements and Title V of the Clean Air Act. While the Department may somehow be capable of enforcing vague and ambiguous environmental standards at times, this does not mean that Condition III.B.4.a is enforceable as a practical matter.

2) The Administrator Must Object

Condition III.B.4.a is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

b) Attachment "B", Condition III.B.4.b

Condition III.B.4.b sets forth air pollution control requirements for three drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.b sets forth a similar "wet suppression" standard as Condition III.B.4.a. Unfortunately, as with Condition III.B.4.a, Condition III.B.4.b also qualifies the requirement to utilize "wet suppression" with the phrase "to the extent practicable." As explained in detail above, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.b unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.b—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.b of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not define what "wet suppression" entails such that it is understood how it is to be "utilized" in order to comply. The Title V Permit lists some "options" for wet suppression, including "water sprays, surfactant use, water jets, foggers, inherent moisture content (including moisture from upstream water sprays), or other equivalent control methods." However, the Title V Permit does not actually require that any specific option be utilized or achieve any level of control efficiency. Further, to the extent that "other equivalent control methods" are used, it is not clear what the term "equivalent" means in this context and whether it refers to control efficiency or other means of measuring "equivalency." Fundamentally, the Title V Permit does not explicitly state what wet suppression means such that this control standard, including utilization of the various "options," is remotely enforceable. This means Condition III.B.4.b is further unenforceable and cannot serve to limit particulate emissions and ensure compliance with the applicable limits at Condition III.B.2.

The Condition also states that emission units must also be "partially enclosed," but it is not clear what "partially enclosed" means. There is no explanation as to what "partially enclosed" means in the Title V Permit or in South32's application. Presumably, "partially enclosed" means that an emission unit is not fully enclosed and not unenclosed, but this would mean that a "partially enclosed" unit can be anywhere from 1% to 99% enclosed. In its application, South32 presumes that emissions from the units subject to Condition III.B.4.b would be controlled by 85%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 38, 44. To assure that this control efficiency is achieved, the Title V Permit must provide more specifics as to what a "partial enclosure" is and whether and how it will assure compliance with applicable emission limits.

Further, with regards to the emission units subject to Condition III.B.4.b, the Title V Permit is similarly ambiguous. Conditions III.B.4.b(1), (2), and (3) identify "Drop of the crushed ore from the mine to the 21200-BIN-001 Mine Shaft Ore Bin (Process #DP-1)," "Drop from 21200-BIN-001 Mine Shaft Ore Bin to 21200-FOR-001 Mine Shaft Ore Discharge Feeder (Process #DP-2)," and "Dump into Primary Crusher Feed Hopper (Process #DP-103)." Again, processes #DP-1, DP-2, and DP-103 are not defined and the Title V permit provides no details regarding these emission units such that it can possibly be understood how these emission units are to be "partially enclosed" and how wet suppression is to be applied effectively in order to control particulate matter and opacity.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.b, ADEQ responded that the phrase is a "common" phrase

"utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.b. As explained above, the phrase "to the extent practicable" makes an appearance in 40 C.F.R. § 60.11(d), but this is a general duty provision and does supplant the need for Condition III.B.4.b to be enforceable in order to assure compliance with the applicable limits at Condition III.B.2. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.b appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.b will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to Petitioners' concerns over the "wet suppression" requirements of Condition III.A.3.b, ADEQ responded:

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

Exhibit 2, Responsiveness Summary to Public Comments at 20. This response did not directly address Petitioners' specific concerns. Although ADEQ stated that, "wet suppression should be applied right below where the material adheres to the conveyor belts, feeders or clogs transfer points," this does not provide any clarity as to what the term "wet suppression" specifically refers to, where it is specifically to be utilized, how it is specifically to be utilized, and to what effect. The statement that, "such language has been placed in several mining permits and has been successfully enforced by the Department" does not address whether the language in the

Hermosa Mine Title V Permit is enforceable for purposes of compliance with applicable requirements and Title V of the Clean Air Act. While the Department may somehow be capable of enforcing vague and ambiguous environmental standards at times, this does not mean that Condition III.B.4.b is enforceable as a practical matter.

ADEQ did not respond to Petitioners' comments regarding what "partially enclosed" means in the context of controlling particulate matter emissions from the emission units subject to Condition III.B.4.b. ADEQ responded to a Petitioners' questions regarding the control efficiencies assumed for sources utilizing "partial enclosure" (*see* Exhibit 2, Responsiveness Summary to Public Comments at 21), but did not respond to concerns regarding a lack of clarity around what "partially enclosed" means and whether Condition III.B.4.b is unenforceable due to a lack of clarity and specificity.

2) The Administrator Must Object

Condition III.B.4.b is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

c) Attachment "B", Condition III.B.4.c

Condition III.B.4.c sets forth air pollution control requirements for one drop subject to A.A.C. R18-2-721, yet the condition is not enforceable as a practical matter.

Condition III.B.4.c sets forth a similar "partially enclosed" standard as Condition III.B.4.b. Unfortunately, as with Condition III.B.4.b, Condition III.B.4.c also qualifies the requirement to utilize a partial enclosure with the phrase "to the extent practicable." As explained in detail above, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.c unenforceable as a practical matter.

Further, the authority cited for Condition III.B.4.c—A.A.C. R18-2-306.01(A)—also does not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.c of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also states that emission units must also be "partially enclosed," but it is not clear what "partially enclosed" means. There is no explanation as to what "partially enclosed" means in the Title V Permit or in South32's application. Presumably, "partially enclosed" means that an emission unit is not fully enclosed and not unenclosed, but this would mean that a "partially enclosed" unit can be anywhere from 1% to 99% enclosed. In its

application, South32 presumes that emissions from the unit subject to Condition III.B.4.c would be controlled by 50%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 44. To assure that this control efficiency is achieved, the Title V Permit must provide more specifics as to what a "partial enclosure" is and whether and how it will assure compliance with applicable emission limits.

Further, with regards to the emission unit subject to Condition III.B.4.c, the Title V Permit is similarly ambiguous. Condition III.B.4.c(1) identifies "Drop from Coarse Ore Feed Conveyor to the SAG Mill Feed Chute (23200-CHU-0002) (Process #DP-104)." Process DP-104 is not defined and the Title V permit provides no detail regarding this emission unit such that it can possibly be understood how this emission units is to be "partially enclosed" in order to control particulate matter and opacity.[12]

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.b, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.c. As explained above, the phrase "to the extent practicable" makes an appearance in 40 C.F.R. § 60.11(d), but this is a general duty provision and does supplant the need for Condition III.B.4.c to be enforceable in order to assure compliance with the applicable limits at Condition III.B.2. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.c appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.c will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent

[12] Compounding the lack of clarity and enforceability is that South32's application identifies DP-104 as "Drop from silo to trucks," not as "Drop from Coarse Ore Feed Conveyor to the SAG Mill Feed Chute." *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 48.

with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

ADEQ did not respond to Petitioners' comments regarding what "partially enclosed" means in the context of controlling particulate matter emissions from the emission unit subject to Condition III.B.4.c. ADEQ responded to a Petitioners' questions regarding the control efficiencies assumed for sources utilizing "partial enclosure" (*see* Exhibit 2, Responsiveness Summary to Public Comments at 21), but did not respond to concerns regarding a lack of clarity around what "partially enclosed" means and whether Condition III.B.4.c is unenforceable due to a lack of clarity and specificity.

2) The Administrator Must Object

Condition III.B.4.c is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

d) Attachment "B", Condition III.B.4.d

Condition III.B.4.d sets forth air pollution control requirements for three drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.d states that South32 must "[a]t all times [] install, maintain, and operate the 21200-DCD-001 Coarse Ore Dust Collection System (DC-1), and to the extent practicable, to control the particulate matter emissions from 21210-CV-0003 Main Shaft Outfeed Conveyor and the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Silo Discharge Dust Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.d unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.d—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.d of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21200-DCD-001 Coarse Ore Dust Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a

continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Dust Collection System consistent with Conditions III.B.2 and III.B.4.d. A lack of specificity around how the 21200-DCD-001 Coarse Ore Dust Collection System is to be installed, maintained, and operated renders Condition III.B.4.d unenforceable as a practical matter.

The Condition also provides no details on the "processes" from which the Dust Collection System will control particulate matter emissions. Conditions III.A.4.d identifies the "Main Shaft Outfeed Conveyor," but it is not clear what this emission unit is, where it is located, and how particulate emissions will be controlled from this process. Conditions III.A.4.d(1)-(3) identify the DP-3, DP-4, and DP-6 "processes," but again the Title V Permit provides no details that would enable any understanding of the processes and how the Dust Collection System will control particulate matter from these processes.

For example, Condition III.B.4.d(2) identifies the "Drop from 21200-GAT-001 Mine Shaft Discharge Gate to 21200-CVR-001 Coarse Ore Overland Conveyor (Process #DP-4)," but process DP-4 is not defined and the Title V Permit does not explain where the mine shaft discharge gate or the coarse ore overland conveyor are located, how they function, and how the 21200-DCD-001 Coarse Ore Dust Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from this drop. Without more specificity and detail, it is unclear how Condition III.B.4.d is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.d, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.d. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.d of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.d will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 21200-DCD-001 Coarse Ore Dust Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.d. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21200-DCD-001 Coarse Ore Dust Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "processes" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.d is to be enforced.

2) The Administrator Must Object

Condition III.B.4.d is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

e) Attachment "B", Condition III.B.4.e

Condition III.B.4.e sets forth air pollution control requirements for a dust collection system subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.e states that South32 must "[a]t all times [] install, maintain, and operate the 21210-CX-00001 Coarse Ore Overland Dust Collector (DC-2), and to the extent practicable, to control the particulate matter emissions from 21210-CV-00001 Coarse Ore Overland Conveyor." To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Overland Dust Collector to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.e unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.e—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.d of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the Coarse Ore Overland Dust Collector is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Overland Dust Collector consistent with Conditions III.B.2 and III.B.4.e A lack of specificity around how the Coarse Ore Overland Dust Collector is to be installed, maintained, and operated renders Condition III.B.4.e unenforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.A.3.e, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source

Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.A.3.e. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.A.3.e of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.A.3.e will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.A.2.

With regards to concerns over the how the 21210-CX-00001 Coarse Ore Overland Dust Collector is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.e. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21210-CX-00001 Coarse Ore Overland Dust Collector will be installed, maintained, and operated such that it assures compliance with applicable limits.

2) The Administrator Must Object

Condition III.B.4.e is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to

provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

f) Attachment "B", Condition III.B.4.f

Condition III.B.4.f sets forth air pollution control requirements for one drop subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.f states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-003 Coarse Ore Silo Collection System (DC-3), and to the extent practicable, to control the particulate matter emissions from the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Silo Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.f unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.f—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.f of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21300-DCD-003 Coarse Ore Silo Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Silo Collection System consistent with Conditions III.B.2 and III.B.4.f. A lack of specificity around how the 21300-DCD-003 Coarse Ore Silo Collection System is to be installed, maintained, and operated renders Condition III.B.4.f unenforceable as a practical matter.

The Condition also provides no details on the "process" from which the Dust Collection System will control particulate matter emissions. Condition III.A.4.f(1) identifies DP-9 as the "process" subject to III.A.4.f, but again the Title V Permit provides no details that would enable

any understanding of this process and how the Dust Collection System will control particulate matter from these processes.

For example, Condition III.B.4.f(1) identifies the "Drop from 21300-CVB-005 Coarse Ore Silo No. 1 Feed Conveyor to 21500-SLO-001 Coarse Ore Silo No. 1 (Process #DP-9)," but process DP-9 is not defined and the Title V Permit does not explain where the coarse ore silo no. 1 feed conveyor or the coarse ore silo no. 1 are located, how they function, and how the 21300-DCD-003 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from this drop. Without more specificity and detail, it is unclear how Condition III.B.4.f is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.f, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.d. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.f of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.f will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 21300-DCD-003 Coarse Ore Silo Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.f. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-003 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "process" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.f is to be enforced.

2) The Administrator Must Object

Condition III.B.4.f is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

g) Attachment "B", Condition III.B.4.g

Condition III.B.4.g sets forth air pollution control requirements for two drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.g states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-004 Coarse Ore Silo Collection System (DC-4), and to the extent practicable, to control the particulate matter emissions from the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Silo Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.g unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.g—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the

extent practicable." Its discretionary inclusion in Condition III.B.4.g of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21300-DCD-004 Coarse Ore Silo Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Silo Collection System consistent with Conditions III.B.2 and III.B.4.g. A lack of specificity around how the 21300-DCD-004 Coarse Ore Silo Collection System is to be installed, maintained, and operated renders Condition III.B.4.g unenforceable as a practical matter.

The Condition also provides no details on the "processes" from which the Dust Collection System will control particulate matter emissions. Conditions III.A.4.g(1) and (2) identifies DP-7 and DP-10 as the "processes" subject to III.A.4.g, but again the Title V Permit provides no details that would enable any understanding of these processes and how the Dust Collection System will control particulate matter from these processes.

For example, Condition III.B.4.g(1) identifies the "Drop from 21300-CHU-001 3-Way Shuttle Chute to 21300-CVB-005 Coarse Ore Silo No. 1 Feed Conveyor (Process #DP-7)," but process DP-7 is not defined and the Title V Permit does not explain where the 3-way shuttle chute or the coarse ore silo no. 1 feed conveyor are located, how they function, and how the 21300-DCD-004 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from this drop. Without more specificity and detail, it is unclear how Condition III.B.4.g is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.g, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has

on the enforceability of Condition III.B.4.g. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.g of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.g will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 21300-DCD-004 Coarse Ore Silo Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.g. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-004 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "processes" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.g is to be enforced.

2) The Administrator Must Object

Condition III.B.4.g is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or

otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

h) Attachment "B", Condition III.B.4.h

Condition III.B.4.g sets forth air pollution control requirements for two drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.h states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-005 Coarse Ore Silo Collection System (DC-5), and to the extent practicable, to control the particulate matter emissions from the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Silo Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.h unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.h—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.h of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21300-DCD-005 Coarse Ore Silo Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Silo Collection System consistent with Conditions III.B.2 and III.B.4.h. A lack of specificity around how the 21300-DCD-005 Coarse Ore Silo Collection System is to be installed, maintained, and operated renders Condition III.B.4.h unenforceable as a practical matter.

The Condition also provides no details on the "processes" from which the Dust Collection System will control particulate matter emissions. Conditions III.A.4.h(1) and (2) identifies DP-8 and DP-11 as the "processes" subject to III.A.4.h, but again the Title V Permit provides no details that would enable any understanding of these processes and how the Dust Collection System will control particulate matter from these processes.

For example, Condition III.B.4.g(1) identifies the "Drop from 21300-CHU-001 3-Way Shuttle Chute to 21300-CVB-006 Coarse Ore Silo No. 2 Feed Conveyor (Process #DP-8)," but process DP-8 is not defined and the Title V Permit does not explain where the 3-way shuttle chute or the coarse ore silo no. 2 feed conveyor are located, how they function, and how the 21300-DCD-005 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from this drop. Without more specificity and detail, it is unclear how Condition III.B.4.h is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.h, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.h. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.h of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.h will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 21300-DCD-005 Coarse Ore Silo Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally.

> Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.h. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-005 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "processes" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.h is to be enforced.

2) The Administrator Must Object

Condition III.B.4.h is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

i) Attachment "B", Condition III.B.4.i

Condition III.B.4.i sets forth air pollution control requirements related to a source subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.i states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-005 Coarse Ore Silo Collection System (DC-11), and to the extent practicable, to control the particulate matter emissions from the entrance to 21500-SLO-004 Coarse Ore Silo No. 4." To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the DC-11 Coarse Ore Silo Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.i unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.i—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.i of the Title V Permit

therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the DC-11 21300-DCD-005 Coarse Ore Silo Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Coarse Ore Silo Collection System consistent with Conditions III.B.2 and III.B.4.i. A lack of specificity around how the DC-11 21300-DCD-005 Coarse Ore Silo Collection System is to be installed, maintained, and operated renders Condition III.B.4.i unenforceable as a practical matter.

The Condition also provides no details on the "entrance to 21500-SLO-004 Coarse Ore Silo No. 4." Although the Title V Permit lists the "Coarse Ore Silo No. 4" in Attachment "C," the Title V Permit does not explain where coarse ore silo no. 4 and its entrance are located, how it functions, and how the DC-11 21300-DCD-005 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from the silo.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.h, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.i. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.i of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the

mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.i will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the DC-11 21300-DCD-005 Coarse Ore Silo Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.i. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the DC-11 21300-DCD-005 Coarse Ore Silo Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "entrance to 21500-SLO-004 Coarse Ore Silo No. 4" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.i is to be enforced.

2) The Administrator Must Object

Condition III.B.4.i is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

j) Attachment "B", Condition III.B.4.j

Condition III.B.4.j sets forth air pollution control requirements for three drops subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.j states that South32 must "[a]t all times [] install, maintain, and operate the 21300-DCD-006 Silo Discharge Dust Collection System (DC-6), and to the extent practicable, to control the particulate matter emissions from the following processes[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the Coarse Ore Silo Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.j unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.j—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.j of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 21300-DCD-006 Silo Discharge Dust Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the Silo Discharge Dust Collection System consistent with Conditions III.B.2 and III.B.4.j. A lack of specificity around how the 21300-DCD-006 Silo Discharge Dust Collection System is to be installed, maintained, and operated renders Condition III.B.4.j unenforceable as a practical matter.

The Condition also provides no details on the "processes" from which the Dust Collection System will control particulate matter emissions. Conditions III.A.4.h(1)-(3) identifies DP-12, DP-13, and DP-14 as the "processes" subject to III.A.4.j, but again the Title V Permit provides no details that would enable any understanding of these processes and how the Dust Collection System will control particulate matter from these processes.

For example, Condition III.B.4.j(3) identifies the "Drop from 21700-FOR-006 Coarse Ore Silo Discharge Feeder No. 3 to 21700-SCB-006 Discharge Feeder Belt Scale No. 3 (Process #DP-14)," but process DP-14 is not defined and the Title V Permit does not explain where the coarse ore silo discharge feeder no. 3 or the discharge feeder belt scale no. 3 are located, how they function, and how the 21300-DCD-006 Silo Discharge Dust Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all

times from this drop. Without more specificity, it is unclear how Condition III.B.4.j is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.j, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.j. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.j of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.j will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 21300-DCD-006 Silo Discharge Dust Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.j. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the 21300-DCD-006 Silo Discharge Dust Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "processes" from which the 21300-DCD-006 Silo Discharge Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.j is to be enforced.

2) The Administrator Must Object

Condition III.B.4.j is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

k) Attachment "B", Condition III.B.4.k

Condition III.B.4.k sets forth air pollution control requirements related to the crusher, screen, and coarse ore silo at the Clark site, which are subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.k states that South32 must "[a]t all times [] install, maintain, and operate the Coarse Ore Dust Collection System, 23100-FAN-0001 (DC-7), and Coarse Ore Dust Collection System, 23100-FAN-002 (DC-8), and to the extent practicable, to control the particulate matter emissions from the Crusher, Screen, and Coarse Ore Silo at the Clark Site." To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the DC-7 and DC-8 Coarse Ore Dust Collection Systems to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.k unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.k—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.k of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the DC-7 and DC-8 Coarse Ore Dust Collection Systems are to be "install[ed], maintain[ed], and operate[d]" such that they achieve a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the DC-7 and DC-8 Coarse Ore Dust Collection Systems consistent with Conditions III.B.2 and III.B.4.k. A lack of specificity around how the DC-7 and DC-8 Coarse Ore Dust Collection Systems System are to be installed, maintained, and operated renders Condition III.B.4.k unenforceable as a practical matter.

The Condition also provides no details on the "Crusher, Screen, and Coarse Ore Silo at the Clark Site." Although the Title V Permit lists the "Primary Crusher," "Primary Crusher Grizzly Screen," and "Coarse Ore Silo" for the Clark site in Attachment "C," the Title V Permit does not explain where these emission units are located, how they function, and how the DC-7 and DC-8 Coarse Ore Dust Collection Systems will be installed, maintained, and operated such that they will control particulate matter emissions at all times from these units. Without more specificity, it is unclear how Condition III.B.4.k is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.k, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.k. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.k of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from

a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.k will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the DC-7 and DC-8 Coarse Ore Dust Collection Systems are to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.k. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the DC-7 and DC-8 Coarse Ore Dust Collection Systems will be installed, maintained, and operated such that they assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "Crusher, Screen, and Coarse Ore Silo at the Clark Site" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.k is to be enforced.

2) The Administrator Must Object

Condition III.B.4.k is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

l) Attachment "B", Condition III.B.4.l

Condition III.B.4.k sets forth air pollution control requirements related to the coarse ore silo at the Clark site, which is subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.l states that South32 must "[a]t all times [] install, maintain, and operate the 23100-DCD-0005 Coarse Ore Dust Collection System (DC-10), and to the extent practicable, to control the particulate matter emissions from the Coarse Ore Silo at the Clark Site." To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the DC-10 Coarse Ore Dust Collection System to control particulate matter emissions. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.l unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.l—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.l of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the DC-10 Coarse Ore Dust Collection System is to be "install[ed], maintain[ed], and operate[d]" such that it achieves a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has "install[ed], maintain[ed], and operate[ed]" the DC-10 Coarse Ore Dust Collection System consistent with Conditions III.B.2 and III.B.4.l. A lack of specificity around how the DC-10 Coarse Ore Dust Collection System is to be installed, maintained, and operated renders Condition III.B.4.l unenforceable as a practical matter.

The Condition also provides no details on the "Coarse Ore Silo at the Clark Site." Although the Title V Permit lists the "Coarse Ore Silo" for the Clark site in Attachment "C," the Title V Permit does not explain where this emission units is located, how it function, and how the DC-10 Coarse Ore Dust Collection System will be installed, maintained, and operated such that it will control particulate matter emissions at all times from these units. It is especially confusing given that Condition III.B.4.k also requires control of particulate matter emissions from the coarse ore silo at the Clark site, meaning additional detail is needed to understand how South32 will comply with the specific requirements of Condition III.B.4.l. Without more specificity, it is unclear how Condition III.B.4.l is to be enforced.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.l, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.l. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.l of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.l will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the DC-10 Coarse Ore Dust Collection System is to be installed, maintained, and operated, ADEQ did not directly respond to Petitioners' comments. ADEQ generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.l. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear how the DC-10 Coarse Ore Dust Collection System will be installed, maintained, and operated such that it assures compliance with applicable limits.

ADEQ does not appear to have responded to Petitioners' comments regarding a lack of detail regarding the "Coarse Ore Silo at the Clark Site" from which the Dust Collection System will control particulate matter emissions. Without more specificity and detail, it is unclear how Condition III.B.4.l is to be enforced.

2) The Administrator Must Object

Condition III.B.4.l is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

m) Attachment "B", Condition III.B.4.m

Condition III.B.4.m sets forth air pollution control requirements for 10 dust and other collection systems subject to 40 C.F.R. § 60 Subpart LL, yet the condition is not enforceable as a practical matter.

Condition III.B.4.m states that South32 must "[a]t all times [], to the extent practicable, maintain, and operate the following pollution control devices in a manner consistent with good air pollution control practices for minimizing particulate matter emissions[.]" To begin with, this Condition is not enforceable because it only requires compliance "to the extent practicable," meaning it effectively allows South32 to forego utilizing the 10 pollution control devices listed under Condition III.B.4.m. As explained in detail above in relation to Condition III.A.3.a and other Conditions, the phrase "to the extent practicable" conveys complete discretion, meaning its inclusion makes Condition III.B.4.m unenforceable as a practical matter.

Further, the authorities cited for Condition III.B.4.m—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e)—also do not include or reference the phrase "to the extent practicable." The NSPS at 40 C.F.R. § 60 Subpart LL also does not contain the phrase "to the extent practicable." Its discretionary inclusion in Condition III.B.4.m of the Title V Permit therefore undermines the enforceability of the NSPS, the Arizona SIP, and is contrary to applicable requirements and Title V of the Clean Air Act.

The Condition also does not explain how the 10 pollution control devices—DC-1—DC-8 and DC-10—DC-11—are to be maintained and operated such that they achieve a continuous level of emission control and can be relied upon to limit the Hermosa Mine's potential to emit as assumed by South32 and as required by Condition III.B.2. Although the Condition requires the control devices to be operated "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions," this is a vague and ambiguous general standard

that does not appear to assure that the control devices are maintained and operated such that they assure compliance with the specific applicable limits set forth under Condition III.B.2.

Although Condition II.D.4.c of the Title V Permit generically requires South32 to "maintain, on-site, records of the manufacturer's specifications or O&M plan for all equipment listed in Attachment 'C' of [the Title V] permit," it is unclear what the "manufacturer's specifications or O&M plan" actually are and whether they provide sufficient detail to understand and assess whether South32 has maintained and operated the 10 control devices consistent with Conditions III.B.2 and III.B.4.m. A lack of specificity around how the 10 dust and other collection systems are to be maintained and operated renders Condition III.B.4.m unenforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition III.B.4.m, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.m. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.m of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition III.B.4.m will only allow South32 to renege on commitments to control air pollution at all times. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition III.B.2.

With regards to concerns over the how the 10 pollution control devices are to be maintained and operated in order to assure compliance with applicable limits, ADEQ did not directly respond to Petitioners' comments, but offered some indirect responses.

With regards to Petitioners' concerns over the meaning of the phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" in Condition III.B.4.m, ADEQ generally responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13.

While ADEQ is correct that the phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" generally makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has on the enforceability of Condition III.B.4.m.[13] Simply because the phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" may make appearances in state and federal regulations does not make its inclusion in Condition III.B.4.m of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Whether or not this is true, it does not change the fact that the phrase is vague and ambiguous and unenforceable as a practical matter.

ADEQ also generally responded to concerns over reliance on vague, undefined, and yet to be disclosed manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition III.B.4.m. Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not

[13] The phrase "in a manner consistent with good air pollution control practices for minimizing particulate matter emissions" does not actually explicitly appear in the Arizona SIP. However, variations of this phrase make appearances. For example, in R18-2-702(D)(2)(a), the SIP states, "Each control device shall be in good operating condition and operated consistent with good practices for minimizing emissions." However, this provision is a generally applicable duty and not meant to provide specific direction for how the pollution control devices subject to Condition III.B.4.m are to be maintained and operated.

address concerns that it is not clear how the 10 pollution control devices are to be maintained and operated such that they assure compliance with applicable limits.

2) The Administrator Must Object

Condition III.B.4.m is unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and its failure to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

n) Attachment "B", Condition III.B.5

Condition III.B.5 claims to set forth monitoring, recordkeeping, and reporting requirements. Unfortunately, Condition III.B.5. sets forth insufficient monitoring requirements that fail to assure compliance with Condition III.B.4, including the applicable particulate matter and opacity limits, wet suppression requirements, and pollution control system installation, operation, and maintenance requirements.

Condition III.B.5.a requires the installation, calibration, maintenance, and operation of a monitoring device for the continuous measurement of pressure change for any "affected facility using a wet scrubbing emission control device." However, it is not clear what emission unit or units this Condition actually applies to. Nothing in Condition III.B.4 requires South32 to utilize a wet scrubbing emission control device or sets forth any requirements for the installation, operation, and maintenance of such a control device. In fact, the only specific reference to a "scrubber" is the identification of the caustic scrubber emission unit, 22600-FAN-051 in South32's application and in Attachment "C" of the Title V Permit. This scrubber, however, is not subject to 40 C.F.R. § 60 Subpart LL. The Title V Permit cannot include monitoring requirements that have no applicability or relevancy to the source being permitted. For one, such monitoring is not required. Further, such a non-applicable monitoring requirement is confusing and undermines the enforceability of the Title V Permit.[14]

Similarly, Condition III.B.5.b requires the installation, calibration, maintenance, and operation of a monitoring device for the continuous measurement of scrubbing liquid flow rate for any "affected facility using a wet scrubbing emission control device." Again, it is not clear what emission unit or units this Condition actually applies to. Nothing in Condition III.B.4 requires South32 to utilize a wet scrubbing emission control device or sets forth any requirements for the installation, operation, and maintenance of such a control device.

[14] If South32 will be utilizing a wet scrubbing emission control device, then the Title V Permit also fails to set forth any requirement that such a scrubber be utilized and fails to set forth any operational requirements and limitations that assure the control device is installed, operated, and maintained effectively such that it controls emissions as required by Condition III.B.2.

Conditions III.B.5.c and III.B.5.d also apply to emission units using a "wet scrubber," but again it is not clear what emission unit or units this Condition actually applies to. Nothing in Condition III.B.4 requires South32 to utilize a wet scrubber to control emissions or sets forth any requirements for the installation, operation, and maintenance of such a control device. ADEQ cannot include monitoring requirements that have no applicability or relevancy to the source being permitted.

Condition III.B.5.f requires weekly opacity monitoring in accordance with Condition II.B for all units subject to Condition III.B. Condition II.B, however, does not set forth sufficient periodic monitoring that assures continuous compliance with the applicable opacity limits of 7% and 10% set forth at Condition III.B.2.b. Because 40 C.F.R. § 60 Subpart LL does not set forth specific opacity monitoring requirements, ADEQ was required to establish opacity monitoring requirement sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the Title V Permit. The Title V Permit does not include sufficient periodic monitoring of opacity.

To begin with, Condition II.B.3.c only requires quantitative opacity monitoring if there is the "appearance" of opacity that is greater than the applicable standard. The word "appearance" is an extremely subjective term and provides no meaningful or enforceable standard for requiring quantitative opacity monitoring. It is not clear who or what is "observing," whether that person (or thing, as the case may be) is qualified to "observe," from what location, or what specific qualitative parameters are actually being observed such that the "appearance" of opacity can be accurately gauged. Emissions could "appear" to exceed the applicable standard for one observer, yet the same emissions could "appear" not to exceed the applicable standard for another observer. While the Title V Permit cannot rely on qualitative monitoring to demonstrate compliance with the applicable quantitative 7% and 10% opacity limits, in this case the Title V Permit allows South32 to completely forego quantitative monitoring of opacity on the basis of qualitative observations of the "appearance" of opacity. This is not sufficient periodic monitoring.

Further, to the extent that quantitative monitoring may occur, it must be conducted by an "EPA Reference Method 9 certified observer," but the Title V Permit at Condition II.B.2 does not require a certified observer to be on site, only "on call." This clearly suggests that certified observers are likely to not be on site in the event of visible emissions requiring Method 9 observations, meaning it is likely not possible to conduct the "immediate" observation required by Condition II.B.3.c. Given that compliance with the 7% and 10% opacity limits relies entirely on observations by certified Method 9 observers, the Title V Permit cannot rely on "on call" observers who are not on-site to conduct the required "immediate" observations to determine compliance.

Beyond the adequacy of Condition II.B.2, Petitioners' also flagged issues with Condition III.B.5.f, namely related to the frequency of monitoring and the location of any opacity monitoring.

With regards to frequency, it is not clear how weekly observations of visible emissions required by Condition III.B.5.f represents sufficiently periodic monitoring. Given that the

emission units and processes subject to the applicable opacity standard, which applies at all times, are involved in the processing of raw materials in a heavy industrial setting, emissions are likely to be variable and equipment and processes could be subject to very regular variations that could affect performance. This is especially true given that the units and processes subject to the applicable opacity standard at Condition III.B.2.b rely entirely on the effective and continuous utilization of various emission controls, inclusion "wet suppression," "partial enclosures," and "dust collectors," to assure compliance. Especially given that South32 presumes high control efficiencies for a number of emissions sources, it would appear that more frequent opacity monitoring is necessary. For example, South32 presumes particulate matter emissions will be controlled from units DP-1 and DP-2 by 85% using wet suppression and partial enclosure. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41. To assure operations are maintained at this high level of performance, the Title V Permit must require more frequent opacity monitoring.

In general, the EPA has described five factors that should be relied upon in determining appropriate monitoring under Title V, including:

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

In the Matter of CITGO Refining and Chemicals Company, L.P., Order on Petition No. VI-2007-01 at 7-8 (May 28, 2009). ADEQ did not specifically address these five factors or otherwise provide a rationale for the selected monitoring frequency in the TSD for the Title V Permit. However, based on EPA's direction, it would appear that more frequent opacity monitoring is not only justified, but necessary. For one, because the applicable opacity limits at Condition III.B.2.b are much more stringent than other applicable limits, violations are more likely. Further, given that the emission units and processes subject to the opacity standard at Condition III.B.2.b are likely to experience variability, both in terms of rate of materials processed and composition of materials processed, and rely heavily on control systems to limit emissions and rely heavily on effective maintenance and operation of add-on controls, such as dust collectors, it is critical to assure sufficiently frequent monitoring that ensures compliance with the applicable opacity limit. It is not clear that weekly monitoring is sufficiently frequent.

With regards to the location of opacity monitoring, it is not clear where weekly observations are to occur in relation to the emission sources subject to Condition III.B. Condition III.B.5.f provides no clarity as to where observations are to take place or where the relevant exhaust points are located such that opacity can be accurately measured and recorded. For "drops" or other transfer points subject to Condition III.B, it is entirely unclear where opacity is to be observed and recorded as the Title V Permit does not explain what these emission units are and where they are specifically located. With regards to dust collectors and other units, it is not clear whether opacity must be measured at a discrete vent exhaust or some

other location. Without additional clarity and specific information, it is not clear how the opacity monitoring requirement at Condition III.B.5.f sets forth sufficient periodic monitoring.

Finally, Condition III.B.5 fails to require sufficient periodic monitoring of "wet suppression" and "partial enclosure" utilization such that it assures that particulate matter emissions will be limited to comply with applicable limits set forth at Condition III.B.2. "Wet suppression" is required to be utilized by Condition III.B.4.a, both "wet suppression" and "partial enclosure" are required to be utilized by Condition III.B.4.b, and "partial enclosure" is required to be utilized by Condition III.B.c in order to control particulate matter emissions from a number of emission sources. According to South32's application, the use of "watering," which is presumed to mean "wet suppression," and/or "partial enclosure" is expected to achieve a particulate matter control efficiency from subject emissions sources by up to 85%. *See* Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 41, 48.

Unfortunately, Condition III.B.5 does not require any quantitative monitoring of "wet suppression" and/or "partial enclosure" control efficiency that would assure compliance with assumed control efficiencies. Further, Condition III.B.5 does not even require any qualitative monitoring to assure that "wet suppression" and/or "partial enclosure" is actually utilized to any degree as required by Conditions III.B.4.a, III.B.4.b, and III.B.4.c. With no monitoring of wet suppression or partial enclosure utilization, let alone any quantitative monitoring of the actual effectiveness of any wet suppression utilization, the Title V Permit does not assure compliance with applicable particulate matter limits, including the applicable opacity limits, and does not limit the Hermosa Mine's potential to emit as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' specific comments regarding Conditions III.B.5.a-d and concerns about the applicability of these Conditions given a lack of information and clarity regarding whether South32 will utilize a wet scrubber for any emission unit subject to Condition III.B.2, ADEQ responded:

> As addressed clearly in Condition III.B.5, the requirements for wet scrubbers apply to "any affected facility using a wet scrubbing emission control device." It should be noted that these conditions have to be read with the context of applicable O&M and manufacturer specification obligations. The requirements in this condition are sufficient.

Exhibit 2, Responsiveness Summary to Public Comments at 22. Petitioners appreciate ADEQ stating the obvious, namely that Conditions III.B.5.a-d would apply to "any affected facility using a wet scrubbing control device," but this is not a response to Petitioners' comments. Namely, ADEQ did not respond to Petitioners' comments that while Conditions III.B.5.a-d apply to units subject to Condition III.B using a wet scrubbing control device, it is not clear whether any such units exist at the Hermosa Mine and whether Conditions III.B.5.a-d actually apply in any way. To ADEQ's response that "these conditions have to be read with the context of applicable O&M and manufacturer specification obligations," it is not clear how this is relevant. Petitioners' comments were over the failure of the Title V Permit to provide information and clarity around the applicability of the monitoring required by Conditions III.B.5.a-d. If any

applicable "O&M and manufacturer specifications" set forth information needed to understand the applicability of Conditions III.B.5.a-d, then such information must be included in the Title V Permit.

With regards to comments over whether Condition II.B.2.c requires sufficient periodic monitoring of opacity, ADEQ responded generally to Petitioners' concerns, stating:

> Condition II.B of Attachment "B" requires the facility to conduct instantaneous surveys or six-minute observations by a certified observer. At the frequency specified in the proposed air quality permit, the facility is expected to conduct instantaneous surveys. If visible emissions are observed and evaluated against the applicable opacity standard, the result must be documented. If an opacity standard is exceeded, the facility must "adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard". The Department believes these conditions are appropriate and abide by applicable regulatory requirements.

This response does not address Petitioners' concerns that the Title V Permit actually allows South32 to forego quantitative opacity monitoring on the basis of the qualitative "appearance" of opacity being less than the quantitative standard. This response does not address concerns that the term "appearance" is ambiguous and unenforceable and that while "instantaneous surveys" of the "appearance" of opacity may be required, such surveys do not assure compliance with the applicable 7% and 10% limits, which can only be determined via Method 9 observations. ADEQ also did not respond to Petitioners' concerns that a certified Method 9 observer does not have to be on site, but rather only "on call." Overall, ADEQ did not meaningfully respond to Petitioners' concerns that Condition II.B.2 does not set forth sufficient periodic monitoring of opacity such that it assures compliance with the applicable limit at Condition III.B.2.b.

ADEQ responded to Petitioners' concerns over the frequency of opacity monitoring under Condition III.B.5.f, stating:

> ADEQ disagrees with this comment. Weekly opacity monitoring has been successfully employed in a number of mining permits. ADEQ has determined that the use of the weekly monitoring, periodic performance testing and the general duty obligation to follow manufacturer specifications and good air pollution practices will serve as reasonable requirements to ensure optimal performance and to track ongoing compliance.

Exhibit 2, Responsiveness Summary to Public Comments at 22. Here, it is first unclear how ADEQ determined that weekly opacity monitoring "has been successfully employed in a number of mining permits." ADEQ cites to no specific permits or examples or explains what it means by "successfully employed." ADEQ appears to argue that, taken together with other requirements, including testing and other general obligations, weekly monitoring will ensure "optimal performance and track ongoing compliance." However, the Title V Permit sets forth no testing requirements for all the emission sources subject to Condition III.B.4. Further, to the extent that South32 must comply with general obligation to control emissions, as explained, the duty only applies "to the extent practicable." Regardless, an obligation to control emissions is not a substitute for sufficient periodic monitoring under Title V of the Clean Air Act.

ADEQ does not appear to have responded to Petitioners' comments regarding where opacity monitoring is to take place. ADEQ does respond to a general comment regarding "where the stacks will be located" and responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides no insight as to where opacity will be measured.

ADEQ does not appear to have responded to Petitioners' comments regarding monitoring of utilization of "wet suppression" and "partial enclosure." The agency responds generally to comments that the permit does not include "monitoring, recordkeeping and reporting requirements to ensure compliance with generic standards like opacity standards," stating:

> Generic standards are tied to monitoring, recordkeeping and reporting requirements in the proposed air quality permit. For example, the opacity of any plume or effluent from metallic processing operations should not exceed 20 percent. If visible emissions exceed this opacity standard, the facility is expected to follow monitoring, recordkeeping and reporting requirements in Condition II.B.3 of Attachment "B". Therefore, the draft permit offers an appropriate methodology for addressing generic standards like opacity standards.

Exhibit 2, Responsiveness Summary to Public Comments at 15. While it is not clear whether this response is on point, it appears to speak to concerns that the Title V Permit fails to assure monitoring of the generic requirement to utilize "wet suppression" and/or "partial enclosure" for a number of emission units. ADEQ's response appears to indicate the agency generically believes that the Title V Permit "offers an appropriate methodology for addressing generic standards like opacity standards." Unfortunately, with regards to "wet suppression" and "partial enclosure" utilization, the Title V Permit sets forth no methodologies for monitoring compliance, either qualitatively or quantitatively.

2) The Administrator Must Object

Condition III.B.5 fails to set forth sufficient periodic monitoring to assure compliance with applicable limits set forth at Condition III.B.2. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring to assure compliance with applicable emission limitations and standards.

o) Attachment "B", Condition III.B.6

Condition III.B.6 sets forth specific PM_{10} emission limits for dust collection systems DC-1—DC-8 and DC-10—DC-11. Unfortunately, these limits do not appear to be enforceable as a practical matter. Petitioners raised this issue with reasonable specificity on pages 28-29 of their technical comments.

Of primary concern is that while Conditions III.B.6.a and III.A.6.b appear to establish PM_{10} emission limits for DC-1—DC-8 and DC-10—DC-11, these same units are only required to control particulate matter emissions "to the extent practicable." As explained above, Condition III.B.4.d of the Title V Permit only requires that unit DC-1 control particulate matter emissions "to the extent practicable." Condition III.B.4.e of the Title V Permit also only requires that unit DC-2 control particulate matter emissions "to the extent practicable." Condition III.B.4.f of the Title V Permit also only requires that unit DC-3 control particulate matter emissions "to the extent practicable." Conditions III.B.4.g, III.B.4.h, III.B.4.i, III.B.4.j, III.B.4.k, and III.B.4.l, of the Title V Permit also only require that units DC-4, DC-5, DC-11, DC-6, DC-7, DC-8, and DC-10 control particulate matter emissions "to the extent practicable."

Read together with Conditions III.B.4.e, III.B.4.f, III.B.4.g, III.B.4.h, III.B.4.i, III.B.4.j, III.B.4.k, and III.B.4.l, this raises two key concerns.

First, that although Conditions III.B.6.a, and III.B.6.b impose PM_{10} emission limits for DC-1—DC-8 and DC-10—DC-11, these limits are sham limits because the dust collector units may not even be capturing and controlling particulate matter emissions from underlying emission units and processes. For example, if DC-6 is not capturing and controlling particulate matter emissions from DP-12, DP-13, and DP-14, as required by Condition III.B.4.j because it is not "practicable," then DC-6 may have little to no particulate emissions, rendering the PM_{10} limit at Condition III.B.6.a meaningless and unenforceable.

Second, inclusion of the phrase "to the extent practicable" with regards to the control of particulate matter emissions from DC-1—DC-8 and DC-10—DC-11 in Conditions III.B.4.e, III.B.4.f, III.B.4.g, III.B.4.h, III.B.4.i, III.B.4.j, III.B.4.k, and III.B.4.l raises concerns that South32 may be allowed to exceed the PM_{10} limits set forth at Conditions III.B.6.a and III.B.6.b if it is not practicable to maintain and operate the units in a manner that effectively controls particulate emissions. Put simply, while Conditions III.B.6.a and III.B.6.b appear to establish strict PM_{10} emissions limits, Conditions III.B.4.e, III.B.4.f, III.B.4.g, III.B.4.h, III.B.4.i, III.B.4.j, III.B.4.k, and III.B.4.l appear to allow compliance only "to the extent practicable."

In either case, the Title V Permit is not clear how Conditions III.B.6.a and III.B.6.b relate to Conditions III.B.4.e, III.B.4.f, III.B.4.g, III.B.4.h, III.B.4.i, III.B.4.j, III.B.4.k, and III.B.4.l and how inclusion of the phrase "to the extent practicable" affects the enforceability of the applicable PM_{10} emissions limits. This continues to underscore that inclusion of the phrase "to the extent practicable" throughout the Title V Permit undermines the clarity and enforceability of applicable emission limits and the Hermosa Mine's potential to emit.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ did not respond directly to Petitioners' comments regarding the enforceability of Conditions III.B.6.a and III.B.6.b. However, ADEQ responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if the enforceability of applicable limits are undermined by the

phrase "to the extent practicable," then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Conditions III.B.6.a and III.B.6.b.

2) The Administrator Must Object

Condition III.B.6 is unenforceable as a practical matter and contrary to applicable requirements given the applicable particulate matter limits appear qualified by the phrase "to the extent practicable" found in applicable Conditions at III.B.4. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

p) Attachment "B", Condition III.B.7

Condition III.B.7 purports to set forth testing requirements to assure compliance with the applicable particulate matter and opacity limits. Unfortunately, the Condition does not appear to assure adequate monitoring and testing to ensure compliance with applicable limits.

Condition III.B.7.a(1) states that to demonstrate compliance with applicable particulate matter limits set forth at Condition III.B.2.a, initial performance tests shall be conducted "for all new affected facilities[.]". It is not clear what the "affected facilities" are or how testing is to be performed at these facilities. As discussed above, Condition III.B appears to apply to a variety of emission units and activities, including various drops and transfer points that are not listed in Attachment "C" of the Title V Permit.

Further, to the extent Attachment "C" identifies units and activities subject to 40 C.F.R. § 60 Subpart LL, it is not clear what all these units and activities are and how particulate matter testing must be conducted to assure compliance. For example, Attachment "C" identifies the "Flotation Trash Screen" at the Taylor site as subject to 40 C.F.R. § 60 Subpart LL, but the "Flotation Trash Screen" is nowhere else mentioned in the Title V Permit. Attachment "C" also identifies the "Mine Shaft Ore Surge Bin" at the Taylor site as subject to 40 C.F.R. § 60 Subpart LL, but the "Mine Shaft Ore Surge Bin" is nowhere else mentioned in the Title V Permit. Similarly, Attachment "C" lists the "Pebble Conveyor" at the Taylor site and indicates that it has "2 Transfer Points," but "Pebble Conveyor" is nowhere else mentioned in the Title V Permit and the transfer points do not appear to be identified anywhere. The list of emission units and activities in Attachment "C" also does not provide sufficient detail to understand specifically how applicable particulate monitoring applies. For example, Attachment "C" identifies six "Feeders/Chutes" associated with the Clark site that are subject to 40 C.F.R. § 60 Subpart LL, but it is not clear if each of these "Feeders/Chutes" is an affected facility or how each emission unit is otherwise subject to Condition III.B.7.a.

Similarly, Conditions III.B.7.a(3) and (4) require opacity observations to assure initial compliance with the applicable opacity limits in Condition III.B.2.b, but again, it is not clear

what "affected units are" and what emission units or activities are subject to initial opacity testing.

Condition III.B.7.a(7) requires that for South32 to demonstrate continued compliance with the applicable particulate matter limits in Condition III.B.2.a, the company must conduct annual performance tests. It is unclear how across-the-board annual performance testing constitutes sufficient periodic monitoring. Given the variability in particulate matter emissions and variability in operations and material processed at the Hermosa Mine, as well as the various different pieces of equipment and processes subject to Condition III.B, it is not clear that annual testing is frequent enough to assure ongoing compliance with the applicable particulate matter limits. Neither the Title V Permit nor the TSD provide basis for requiring across-the-board annual particulate matter testing for each emission unit and activities subject to Condition III.B.

Condition III.B.7.a(8) refers to compliance with Condition III.B.5.d, which refers to testing of a wet scrubber. As explained earlier, it is not clear whether a wet scrubber will be installed and operated to control emissions for any emission unit subject to Condition III.B. This Condition does not appear applicable and its inclusion is both confusing and unnecessary.[15]

Condition III.B.7.b purports to set forth testing requirements to assure compliance with the PM_{10} limits established in Condition III.B.6. While the Condition does require PM_{10} testing, it only requires testing once a year, which appears too infrequent. Given the variability in PM_{10} emissions and variability in operations and material processed at the Hermosa Mine, the Title V Permit must require more frequent testing to assure ongoing compliance. Neither the Title V Permit nor the TSD provide a basis for requiring only annual testing for the emission units subject to the PM_{10} limits established in Condition III.B.6.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear that ADEQ completely responded to Petitioners' comments on Condition III.B.7.

There is no direct response to Petitioners' concerns that Condition III.B.7 does not provide sufficient information and detail to understand what specific "affected facilities" are subject to applicable particulate matter and opacity testing requirements. ADEQ does respond to a general comment regarding "where the stacks will be located" and responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides no insight as to what "affected facilities" are subject to applicable particulate matter and opacity testing and how particulate matter and opacity will be tested from these facilities in order to assure compliance.

ADEQ responded generally to Petitioners' concerns that "performance testing is infrequent across the proposed air quality permit," stating:

[15] If a wet scrubber is intended to be utilized for any emission unit Subject to Condition III.B, then the Title V permit fails to assure that South32 installs, operates, and maintains a wet scrubber to assure compliance with applicable requirements.

> The Department has determined the frequency of performance testing based on emissions, limitations and/or air pollution controls. In the mining industry, annual performance testing, or performance testing every two (2) to three (3) years, or even once per permit term which is five (5) years, is common. Therefore, the performance testing frequency stipulated in the proposed air quality permit is reasonable for ongoing demonstrations of compliance with emission limitations.

Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides little insight into ADEQ's assertion that annual particulate matter performance testing is sufficiently frequent to assure compliance with applicable limits at Condition III.B.2. Although performance testing every two to three years, or even once every five years, may be "common" in the mining industry, a determination of sufficient monitoring is source-specific. It is difficult to understand how ADEQ could broadly conclude that simply because testing may be less frequent within "the mining industry," it is appropriate for the Hermosa Mine and its unique equipment, geology, and other factors that influence particulate matter emissions.

With regards to Petitioners' specific comments regarding Condition III.B.7.a(8), ADEQ provided no direct response. ADEQ previously asserted the inclusion of Conditions III.B.5.a-d was appropriate, which indicates the agency likely believes Condition III.B.7.a(8) is also appropriate. However, given that it does not appear that South32 will utilize a wet scrubber for any emission unit subject to Condition III.B.2, it does not appear that it is appropriate to include Condition III.B.7.a(8).

2) The Administrator Must Object

Condition III.B.7 fails to set forth sufficient periodic monitoring to assure compliance with applicable limits set forth at Condition III.B.2. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring to assure compliance with applicable emission limitations and standards.

4. Attachment "B", Condition IV.A

This Condition establishes general limitations for the construction and operation of non-emergency compression ignition internal combustion engines at the Hermosa Mine that are subject to the NSPS at 40 C.F.R. § 60, Subpart IIII. Unfortunately, the Condition does not set forth sufficiently specific limits and sufficient periodic monitoring such that the operational and other emission limitations assure compliance and are enforceable as a practical matter. Petitioners raised Concerns with the following provisions of Attachment "B" Condition IV.A with reasonable specificity on pages 30-34 of their technical comments.

a) Attachment "B", Condition IV.A.2

Condition IV.A.2.a states that engines subject to IV.A shall "only use Tier 4 diesel ICEs." The phrase "Tier 4 diesel ICEs [internal combustion engines]" is not defined in the Title

V Permit, however, and it is not clear what the phrase "Tier 4 diesel internal combustion engines" means.

The authority cited for Condition IV.A.2.a is A.A.C. R18-2-306.01(A), which relates to the general establishment of voluntary emission limitations and standards and does not refer to any definition of "Tier 4 diesel internal combustion engines." The NSPS at 40 C.F.R. § 60, Subpart IIII also do not refer to "Tier 4 diesel internal combustion engines" in their provisions.

Portions of Condition IV.A of the Title V Permit refer to provisions of 40 C.F.R. § 1039, which establishes controls for new and in-use nonroad compression ignition internal combustion engines and sets forth emission certification standards for manufacturers. 40 C.F.R. § 1039.801 defines "Tier 4" as "relating to the Tier 4 emission standards, as shown in § 1039.101 and § 1039.102." The Title V Permit may mean that South32 shall only use engines that are certified as compliant with the standards set forth at 40 C.F.R. §§ 1039.101 and 1039.102, but the Title V Permit does not explicitly state this and it is not clear as Condition IV.A.2.a is currently written whether this is what was intended.

Further, 40 C.F.R. § 1039.101 and 1039.102 set forth various potentially applicable emission limitations and standards that could be certified as "Tier 4," meaning it is not possible to understand what the Title V Permit is specifically referring to with the phrase "Tier 4 diesel internal combustion engine." For example, while 40 C.F.R. § 1039.101(b) sets forth specific exhaust emissions limits for engines manufactured after 2014, 40 C.F.R. § 1039.101(d) sets forth alternative limits for when manufacturer's may use "emission credits under the averaging, banking, and trading program, as described in subpart H of this part." Further, the 40 C.F.R. § 1039.102 sets forth specific exhaust emissions limits for engines manufactured on or before 2014. It is not clear if the reference to "Tier 4 diesel internal combustion engine" is meant to refer to compliance with specific emission limits set forth at 40 C.F.R. § 1039 or a more generic set of limits. Regardless, without more explanation as to what is meant by "Tier 4 diesel internal combustion engine," Condition IV.A.2.a is unenforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

It is not clear that ADEQ responded to Petitioners' comments on Condition IV.A.2 as there appears to be no direct response.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns related to Condition IV.A.2. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Condition IV.A.2.

2) The Administrator Must Object

Condition IV.A.2.a is unenforceable as a practical matter as it fails to explain what is actually required by South32 with regards to the "use of Tier 4 diesel internal combustion engines." ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of Condition IV.A.2.a to provide sufficiently specific information upon which to understand what is required of South32 and whether the company is operating the Hermosa Mine in compliance.

b) Attachment "B", Condition IV.A.3

Condition IV.A.3 establishes diesel fuel requirements for engines subject to Condition IV.A. Specifically, Condition IV.A.3.a limits "sulfur content" to 15 ppm and Condition IV.A.3.b limits "cetane index" to 40 or "maximum aromatic content" to 35 volume percent. Unfortunately, the Title V Permit does not set forth any monitoring of fuel sulfur content, cetane index, or aromatic content that would assure compliance with these quantitative limits.

Although Condition IV.A.8.c does require South32 to "keep the records from the fuel vendor to demonstrate compliance with Condition IV.A.3," it is not clear how this recordkeeping requirement represents sufficient periodic monitoring. For one, as written, this Condition only requires South32 to keep records in order to demonstrate compliance with Condition IV.A.3. The Condition does not require South32 to keep any specific type of record from the fuel vendor or to acquire any records with any frequency, does not require that any vendor records include information regarding sulfur content, cetane index, or aromatic content, does not require South32 to monitor any records to verify compliance, and provides no other details that would indicate that the act of simply "keeping" any "records" will assure compliance. As written, Condition IV.A.8.c does not set forth sufficient periodic monitoring that assures compliance with Condition IV.A.3.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ responded to Petitioners' concerns on this issue, stating, "ADEQ acknowledges this comment. A permit condition was added to require the Permittee to keep the fuel records to demonstrate compliance with this condition." Exhibit 2, Responsiveness Summary to Public Comments at 23. Although ADEQ did add Condition IV.A.8.c, as explained, this Condition is written in such a way that it does not constitute sufficient periodic monitoring that assures compliance. The Condition expressly states that merely "keeping" records will assure compliance with Condition IV.A.3, providing no additional details to ensure that proper records are acquired and kept with any frequency and that records are properly reviewed to regularly verify compliance. The addition of Condition IV.A.8.c did not address concerns over the Title V Permits' failure to assure sufficient. monitoring of fuel sulfur content, cetane index, or aromatic content to ensure compliance with Condition IV.A.3.

2) The Administrator Must Object

Condition IV.A.3 is unenforceable as a practical matter as the Title V Permit fails to provide sufficient periodic monitoring of fuel sulfur content, cetane index, or aromatic content that assures compliance. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring to assure compliance with applicable emission limitations and standards.

c) Attachment "B", Conditions IV.A.4.a and IV.A.4.b

Conditions IV.A.4.a and IV.A.4.b establish emission limitations and standards for the engines subject to Condition IV.A. However, the Title V Permit is not clear what limitations or standards apply or to what specific engines, making the Condition unenforceable as a practical matter.

Condition IV.A.4.a applies to engines with maximum engine power less than or equal to 2,237 kilowatt or 3,000 HP and a displacement of less than 10 liters per cylinder. The list of engines in Attachment "C" does not provide sufficient detail to determine which engines are subject to this limit. While Attachment "C" lists maximum capacity in kilowatts, it does not list cylinder displacement.

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

To be sure, Condition IV.A.4.a requires compliance "as applicable," but it is just not possible to determine what requirements are applicable. A determination of what is applicable depends upon the date an engine was manufactured, what compliance requirements were chosen by the manufacturer, among other factors. While it may be appropriate for ADEQ to incorporate by reference applicable regulations, the agency cannot simply present a grab bag of regulatory citations and expect the public, or its own inspectors for that matter, to understand what requirements actually apply to the Hermosa Mine. As EPA has noted, the use of incorporation by reference must be balanced "with the need to issue comprehensive, unambiguous permits useful to all affected parties, including those engaged in field inspections." EPA, White Paper

Number 2 for Improved Implementation of the Part 70 Operating Permits Program (March 5, 1996) at 38. Further, regulatory citations "must be detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation." *Id*. at 37.

Condition IV.A.4.b states that engines with a displacement of less than 30 liters per cylinder must meet a "not-to-exceed" standard when conducting performance tests in-use as indicated in Condition IV.A.7.a. It is not clear what this Condition means or is referring to. Condition IV.A.7.a relates to testing and does not set forth explicit emission limitations. Conditions IV.A.7.a(2), IV.A.7.a(3), and IV.A.7.a(4) refer to various "not-to-exceed" standards, but it is not clear how they are applicable. Condition IV.A.7.a(3) refers to "Tier 2 or Tier 3 emission standards," yet Condition IV.A.2.a of the Title V Permit refers to "Tier 4" compliance. Condition IV.A.7.a(2) refers to "not-to-exceed" standards "as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d)." These regulatory provisions refer to several "not-to-exceed" emission standards and 40 C.F.R. § 1039.104(d) provides a process whereby a manufacturer can obtain an exemption to these requirements for certain engines. Condition IV.A.7.a(4) refers to compliance with "not-to-exceed" standards set forth at 40 C.F.R. § 1042, but this regulation relates to compression ignition marine engines. Again,

Again, a Title V Permit must assure compliance with applicable requirements. To do so, a permit must be comprehensive, unambiguous, and useful to all affected parties. Further, permits must be detailed enough that the manner in which any referenced material applies to a facility is clear. Here, it is not clear what specific limitations and standards under Conditions IV.A.4.a and IV.A.4.b apply to the applicable engines at the Hermosa Project. The reference to multiple federal regulatory citations, which in turn contain multiple different emission limitations and standards that may or may not be applicable, provides no specific insight into what specific emission limitations and standards apply to the engines subject to Condition IV.A. To be enforceable and to assure compliance with applicable requirements, the Title V Permit must specifically identify which provisions of 40 C.F.R. § 1039 are applicable and explicitly set forth the limitations and requirements that the applicable engines must meet in order to be enforceable.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ did not directly respond to Petitioners' concerns over Conditions IV.A.4.a and IV.A.4.b. However, ADEQ generically responded to Petitioners' concerns that the Title V Permit's incorporation of various federal regulatory citations was not sufficient to ensure compliance with applicable requirements and to ensure the enforceability of the Title V Permit. In response to the paraphrased comment that "some conditions of Attachment 'B' simply cited some regulatory provisions directly, which is not enough," ADEQ responded:

> This language is directly from the federal regulations that this project is subject to. This way of referencing regulatory requirements high-level is relatively common in ADEQ permits and they are effective because the referenced provisions are identified clearly.

Exhibit 2, Responsiveness Summary to Public Comments at 23. ADEQ is simply wrong in its response. In citing multiple federal regulations that contain several different emission limitations and standards that may or may not be applicable, Conditions IV.A.4.a and IV.A.4.b do not clearly identify applicable requirements or assure the enforceability of any applicable requirements. Although it is clearly acceptable for ADEQ to cite "high-level" regulatory requirements in Title V Permits, simply presenting a "high-level" regulatory citation alone is not sufficient to ensure a permit is comprehensive, unambiguous, and useful to all affected parties, and is detailed enough that the manner in which any referenced material applies to a facility is clear.

ADEQ also responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns related to Conditions IV.A.4.a and IV.A.4.b. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Conditions IV.A.4.a and IV.A.4.b.

2) The Administrator Must Object

Conditions IV.A.4.a and IV.A.4.b do not provide sufficient information from which to understand what emission limitations and standards are applicable. The Conditions fail to assure compliance with applicable requirements and are unenforceable as a practical matter. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

d) Attachment "B", Condition IV.A.4.c

Condition IV.A.4.c sets forth additional emission limits for the engines subject to Condition IV.A and was inserted into the final Title V Permit in response to public comments on the draft Title V Permit.[16] Unfortunately, this Condition does not appear to set forth legitimate federally enforceable limits on the Hermosa Mine's potential to emit such that they assure emissions will not exceed major source thresholds under the PSD provisions of the Arizona SIP.

[16] Condition IV.A.4.c was not included in the draft Title V Permit, meaning Petitioners did not have an opportunity to comment on this provision during the public comment period. The Condition was added to the proposed and then final Title V Permit after the close of the public comment period. Because the grounds for objecting arose after the close of the public comment period, the Administrator has authority to review objections to Condition IV.A.4.c. *See* 40 C.F.R. § 70.8(d).

Although the Condition establishes ton/year limits for NO_x, CO, and VOCs, the compliance requirements under Condition IV.A.6.c require South32 to conduct only annual testing and assess compliance based on the "prior 12 months." This approach to assessing compliance means that South32 will only calculate emissions based on single 12-month block periods, rather than calculate emissions on a rolling basis. Such an approach to compliance undermines the ability of the annual limits to truly limit the Hermosa Mine's potential to emit on a yearly basis.

To illustrate, if South32 conducted testing annually on December 31, this would yield annual emissions data just for every year-long period from December 31-December 31. This approach, however, would not yield data for other year-long periods, such as from April 1-April 1, June 15-June 15, etc. Even if South32 could demonstrate compliance for the year-long period from December 31-December 31, the company could exceed the annual limits during other year-long periods without detection. For the annual limits to practically limit the Hermosa Mine's potential to emit, the Title V Permit must assure compliance on a rolling basis and ensure that emissions are limited during every yearly period the mine is operating, whether that be every 12-month period or a shorter timeframe (e.g., every 52-week or 365-day period)

1) ADEQ's Response to Comments did not Resolve This Issue

In response to comments, ADEQ responded that it updated the permit "to reflect the manufacturer guarantee's emission limits which were also used in the emission calculations and modeling analysis." Exhibit 2, Responsiveness Summary to Public Comments at 25. While it was critical for ADEQ to include these applicable emission limits, ADEQ was also obligated to ensure the limits, particularly annual limits, established enforceable limitations on the Hermosa Mine's potential to emit. Unfortunately, as written, the Title V Permit does not set forth enforceable limitations on the yearly potential to emit for the engines subject to Condition IV.A.

2) The Administrator Must Object

While Condition IV.A.4.c sets forth applicable annual emission limits, the Title V Permit explains that compliance is only based on block 12-month periods and not on a rolling basis. The annual limits are therefore unenforceable as a practical matter. Accordingly, Condition IV.A.4.c does not establish legitimate limits on yearly potential to emit and does not support ADEQ's claim that the Hermosa Mine is not a major source under the Arizona SIP's PSD requirements. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

e) Attachment "B", Condition IV.A.5

Condition IV.A.5 sets forth operating requirements for applicable engines. However, the Title V Permit is not clear what operating requirements apply or to what specific engines, making the Condition unenforceable as a practical matter.

Condition IV.A.5.a states that the applicable engine must be operated and maintained to "achieve the emission standards as required in this Section over the entire life of the engine." As explained above, it is not clear what emission standards are actually required for each engines. Conditions IV.A.4.a and IV.A.4.b cite various federal regulatory requirements, but do not provide any clarity as to what specific emission limitations apply to what engines. Although Condition IV.A.4.c sets forth hourly and annual emission limits, these limits are overall caps for the engines subject to Condition IV.A and do not apply to individual engines. Furthermore, the term "life of the engine" is not defined, making this provision unenforceable. As Petitioners questioned in their comments, "Is 'life of the engine' the warranty life, physical life, or some other metric of 'life'? Although this term is stated in applicable requirements at 40 C.F.R. § 60.4206, it is not defined or otherwise expounded upon to ensure specific meaning. For Condition IV.A.5.a to be enforceable as a practical matter, the Title V Permit must specifically explain what "life of the engine" means.

Condition IV.A.5.c is not enforceable as a practical matter. Condition IV.A.5.c(1) states that the applicable engines must be operated and maintained according to the "manufacturer's emission-related written instructions." It is unclear what the "manufacturer's emission-related written instructions" actually are in the case of the applicable engines at the Hermosa Mine. The Title V Permit does not explain what these instructions are and set forth their relevant provisions to ensure that this Condition can be enforced as a practical matter.

Condition IV.A.5.c(2) states that South32 shall only change "those emission-related settings that are permitted by the manufacturer." The Title V Permit does not identify what specific "emission-related settings" are permitted to be changed by the manufacturer or under what authority, making this provision unenforceable as a practical matter.

Finally, Condition IV.A.5.c(3) states that South32 must "[m]eet the requirements of 40 CFR Part 1068, as they apply." 40 C.F.R. § 1068 broadly sets forth applicability and miscellaneous provisions that apply to a variety of engine and equipment categories. For the Title V Permit to simply state that South32 must comply with 40 C.F.R. § 1068, as applicable, provides no clarity as to what requirements actually apply to the engines subject to Condition IV.A. Given this lack of specificity, it is not possible to enforce Condition IV.A.5.c(3). To the extent that any provisions of 40 C.F.R. § 1068 apply to the Hermosa Mine, the Title V Permit must specifically identify these requirements to assure compliance with applicable requirements and ensure the enforceability of the Title V Permit.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ did not directly respond to Petitioners' concerns over Condition IV.A.5.

ADEQ responded very generally to concerns that various conditions are unenforceable as a practical matter. *See* Exhibit 2, Responsiveness Summary to Public Comments at 8. However, this response did not address concerns over ambiguity or a lack of specificity in permit conditions that could render them unenforceable as a practical matter, and certainly did not respond to specific concerns related to the enforceability of Conditions IV.A.5.a and IV.A.4.c. ADEQ asserts, "Emission limitations and/or standards in the proposed air quality permit will be

verified by monitoring, recordkeeping, and/or reporting requirements." *Id*. However, if applicable limits are ambiguous or lack specific meaning, then monitoring, recordkeeping, and/or reporting cannot assure compliance. ADEQ concludes its brief response to this issue by stating, "ADEQ has determined that the terms of the permit are enforceable as a practical matter." *Id*. The agency is simply incorrect in its determination as it relates to Conditions IV.A.5.a and IV.A.5.c.

ADEQ generally responded to concerns over reliance on manufacturer's specifications and/or operation and maintenance plans, stating:

> Manufacturer's specifications and O&M plans are a common concept in permits to ensure that process and control equipment are being maintained optimally. Manufacturer's specifications and O&M plans are required to be maintained on-site. ADEQ inspectors will conduct unannounced inspections to check this requirement. The facility must demonstrate that they are maintaining their equipment in accordance with the specifications.

Exhibit 2, Responsiveness Summary to Public Comments at 19. This response did not directly address Petitioners' specific concerns over Condition IV.A.5.c(1). Although manufacturer's specifications and O&M plans may be "common concepts" in permits, this response does not address concerns that it is not clear what the "manufacturer's emission-related written instructions" such that Condition IV.A.5.c(1) can be enforced.

ADEQ also generically responded to Petitioners' concerns that the Title V Permit's incorporation of federal regulatory citations was not sufficient to ensure compliance with applicable requirements and to ensure the enforceability of the Title V Permit. In response to the paraphrased comment that "some conditions of Attachment 'B' simply cited some regulatory provisions directly, which is not enough," ADEQ responded:

> This language is directly from the federal regulations that this project is subject to. This way of referencing regulatory requirements high-level is relatively common in ADEQ permits and they are effective because the referenced provisions are identified clearly.

Exhibit 2, Responsiveness Summary to Public Comments at 23. ADEQ is simply wrong in its response. In citing 40 C.F.R. § 1068, Condition IV.A.5.c(3) does not clearly identify applicable requirements or assure the enforceability of any applicable requirements. Although it is clearly acceptable for ADEQ to cite "high-level" regulatory requirements in Title V Permits, simply presenting a "high-level" regulatory citation alone is not sufficient to ensure a permit is comprehensive, unambiguous, and useful to all affected parties, and is detailed enough that the manner in which any referenced material applies to a facility is clear.

2) The Administrator Must Object

Conditions IV.A.5.a and IV.A.5.c are not enforceable as a practical matter. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

f) Attachment "B", Condition IV.A.6

This Condition sets forth compliance requirements for engines subject to Condition IV.A, yet these requirements are not enforceable as a practical matter and fail to ensure compliance with applicable requirements.

Condition IV.A.6.a requires South32 to comply with emission standards in Condition IV.A.4.a by purchasing an engine certified to the emission standards in Condition IV.A.4.a. As discussed above, Condition IV.A.4.a does not set forth applicable emission standards. The Condition cites multiple federal regulatory provisions setting forth various emission standard and limitations that may or may not be applicable to the engines subject to Condition IV.A. It is not clear what standards under Condition IV.A.4.a apply, making it unenforceable as a practical matter. Because Condition IV.A.4 is not enforceable as a practical matter, Condition IV.A.6.a is also not enforceable and does not ensure compliance with applicable requirements.

Condition IV.A.6.b allows South32 to completely ignore Condition IV.A.6.a, authorizing the company to operate an applicable engine that does not comply with manufacturer's "emission-related written instructions." Conditions IV.A.6.b(1)-(3) variously authorize South32 to operate engines based instead on a "maintenance plan," "good air pollution control practice for minimizing emissions," and on emissions testing demonstrating compliance with applicable emission standards. These standards are not enforceable as a practical matter.

On the latter standard, it is not clear what emission standards actually apply. As discussed above, although Condition IV.A.4.c sets forth overall hourly and annual emission limits for all engines subject to Condition IV.A, it is overall not clear what specific emission limitations and standards apply to each individual engine. While Conditions and IV.4.a and IV.4.b purport to establish emission limitations and standards for individual engines, these Condition are not clear as to what specific limitations and standards actually apply and are unenforceable as a practical matter. Given this, to the extent that Conditions IV.A.6.b(1)-(3) require emissions testing demonstrating compliance with applicable limits, these requirements are not enforceable because it is not clear what the applicable emission standards actually are.

With regards to the requirements of Conditions IV.A.6.b(1)-(3) that South32 keep a "maintenance plan" and operate the engines in a manner consistent with "good air pollution control practice for minimizing emissions," these terms are ambiguous and not defined. The Title V Permit sets forth no specific requirements as to what a "maintenance plan" should include and does not explain what "good air pollution control practice for minimizing emissions" actually means, making Conditions IV.A.6.b(1)-(3) unenforceable as a practical matter.

1) ADEQ's Response to Comments did not Resolve This Issue

In response to Petitioners' comments regarding Condition IV.A.6, ADEQ responded:

> This language is from the federal regulations that this project is subject to, and is sufficiently clear. Condition IV.A.4.a does establish applicable certification emission

standards for certified engines. Condition IV.A.6.a and Condition IV.A.6.b are just two options allowed for the Permittee to demonstrate compliance from the federal regulations. If the commenter disagrees with the federal regulations, please feel free to file an appeal to EPA.

Exhibit 2, Responsiveness Summary to Public Comments at 24. As is clear, ADEQ did not respond to the specifics of Petitioners' comments. Rather, the agency simply claimed that both Condition IV.A.4.a and Condition IV.A.6 are "sufficiently clear." As explained above, these conditions are not clear. Condition IV.A.4.a does not specifically identify the applicable emission standards, instead citing a variety of federal regulations that may or may not be applicable. Although language in Condition IV.A.6 may be "from the federal regulations," this does not mean that the Condition is enforceable as a practical matter or assures compliance with applicable requirements.

2) The Administrator Must Object

Condition IV.A.6 is not enforceable as a practical matter and does not assure compliance with applicable emission limitations and standards. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

g) Attachment "B", Condition IV.A.7

Condition IV.A.7 sets forth performance testing requirements that apply to engines with displacement of less than 30 liters per cylinder if South32 does not demonstrate compliance with Condition IV.A.6.a. Unfortunately, it is not clear how this Condition applies and what requirements are specifically applicable to the engines subject to Condition IV.A.7.

The Condition appears to simply restate provisions of 40 C.F.R. § 60.4212, which cites various broad federal regulatory provisions, but does not actually set forth what testing requirements specifically apply to the individual engines at the Hermosa Mine. For example, Condition IV.A.7.a(1) refers to testing requirements under 40 C.F.R. § 1039, Subpart F and 40 C.F.R. § 1042, Subpart F, but alternatively refers to testing procedures specified in 40 C.F.R. § 60.4213. While the specific testing requirement depends upon the volume of displacement of an engine and upon the applicable emission standards, the Title V Permit does not identify these specific criteria and does not set forth the actual applicable testing requirements. Ultimately, Condition IV.A.7.a(1) refers to at least three sets of testing requirements set forth in federal regulations, all or some of which may or may not be applicable to the engines subject to Condition IV.A. The ambiguity as to what testing requirements apply makes Condition IV.A.7.a unenforceable as a practical matter and incapable of assuring sufficient periodic testing.

The ambiguity in Condition IV.A.7.a(1) is underscored by the fact that Conditions IV.A.7.a(3) and IV.A.7.a(4) refer to testing and other requirements that are obviously not applicable to the engines at the Hermosa Mine. Condition IV.A.7.a(3) refers to testing for engines subject to "Tier 2 or Tier 3 emission standards," yet the Title V Permit indicates that none of the engines subject to Condition IV.A are subject to Tier 2 or Tier 3 emission standards.

Further, Condition IV.A.7.a(4) refers to engines complying with emission standards in 40 C.F.R. § 1042, yet 40 C.F.R. § 1042 applies to marine compression ignition internal combustion engines. Overall, it appears that ADEQ simply restated portions of 40 C.F.R. § 60.4212 without actually assessing and identifying what provisions were or were not applicable to the engines at the Hermosa Mine.

Further, While Condition IV.A.7.a sets forth testing requirements, it is not clear when they apply and at what frequency. To this end, it is not clear how the testing assures sufficient periodic monitoring of engines to assure compliance with applicable requirements. Although 40 C.F.R. § 60.4212 variously requires testing of engines, it does not appear to set forth any schedule for regular testing in order to assure ongoing compliance with applicable requirements. Given this, it appears that the Title V Permit does not assure sufficient periodic monitoring that assures compliance with applicable requirements.

Finally, while Condition IV.A.7.b sets forth periodic testing requirements to assure compliance with the applicable limits set forth in Condition IV.A.4.c, the Condition unfortunately does not explain what test method or methods are to be used to assess compliance with the applicable limits.[17] The Condition simply states that South32 "shall test each engine," but does not otherwise set forth what testing entails, explain what methodologies will be utilized, and overall assure that any testing yields reliable data that is representative of compliance, as required by 40 C.F.R. § 70.6(a)(3)(i)(B). If Condition IV.A.7.b is meant to rely on the testing requirements set forth in Condition IV.A.7.a, then the Title V Permit absolutely does not set forth sufficient periodic monitoring given the lack of clarity, ambiguity, and unenforceability of Condition IV.A.7.a.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ does not appear to have responded directly to Petitioners' comments regarding Condition IV.A.7.

With regards to the incorporation of language found in the NSPS at 40 C.F.R. § 60, Subpart IIII, ADEQ responded:

> This language is from the federal regulations that this project is subject to, and is sufficiently clear. Condition IV.A.4.a does establish applicable certification emission standards for certified engines. Condition IV.A.6.a and Condition IV.A.6.b are just two options allowed for the Permittee to demonstrate compliance from the federal regulations. If the commenter disagrees with the federal regulations, please feel free to file an appeal to EPA.

[17] Condition IV.A.7.b was not included in the draft Title V Permit, meaning Petitioners did not have an opportunity to comment on this provision during the public comment period. The Condition was added to the proposed and then final Title V Permit after the close of the public comment period. Because the grounds for objecting arose after the close of the public comment period, the Administrator has authority to review objections to Condition IV.A.7.b. *See* 40 C.F.R. § 70.8(d).

Exhibit 2, Responsiveness Summary to Public Comments at 24. As explained above, Condition IV.A.7.a is not clear. Although language in Condition IV.A.7.a may be "from the federal regulations," this does not mean that the Condition is enforceable as a practical matter or assures compliance with applicable requirements.

ADEQ responded generally to Petitioners' concerns that "performance testing is infrequent across the proposed air quality permit," stating:

> The Department has determined the frequency of performance testing based on emissions, limitations and/or air pollution controls. In the mining industry, annual performance testing, or performance testing every two (2) to three (3) years, or even once per permit term which is five (5) years, is common. Therefore, the performance testing frequency stipulated in the proposed air quality permit is reasonable for ongoing demonstrations of compliance with emission limitations.

Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides little insight as to whether the frequency of testing required by Conditions IV.A.7.a and IV.A.7.b is sufficient. Although performance testing every two to three years, or even once every five years, may be "common" in the mining industry, a determination of sufficient monitoring is source-specific. It is difficult to understand how ADEQ could broadly conclude that simply because testing may be less frequent within "the mining industry," it is appropriate for the Hermosa Mine and its unique equipment, geology, and other factors that influence particulate matter emissions.

2) The Administrator Must Object

Conditions IV.A.7 is not enforceable as a practical matter, does not assure compliance with applicable emission limitations and standards, and does not set forth sufficient periodic testing and monitoring to assure compliance with applicable requirements. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

5. Attachment "B", Condition IV.B

This Condition sets forth applicable limitations and requirements for natural gas-fired internal combustion engine generators that will power the Hermosa Mine. As proposed, South32 intends to construct and operate either 58 CAT 3520 DSL engines each rated at 2,600 kilowatts or 27 JGC 624 engines each rated at 4,481 kilowatts. Unfortunately, the Title V Permit does not assure that the engines will meet applicable requirements and does not include sufficient periodic monitoring that assures compliance. Petitioners commented on the adequacy of Condition IV.B on pages 34-37 of their technical comments.

a) Attachment "B", Condition IV.B.3.b

In comments on the draft Title V Permit, Petitioners flagged that based on applicable emission rates set forth under 40 C.F.R. § 60, Subpart JJJJ and incorporated into the permit, the

engines had the potential to emit far greater amounts of NO_x and other pollutants than assumed in South32's application. In response to comments, ADEQ added Condition IV.B.3.b, setting forth pound/hour and ton/year limits for NOx, CO, and VOCs from all applicable engines, as well as added a compliance provision at Condition IV.B.4.e and testing requirements at Condition IV.B.5.d.[18] Although Petitioners appreciate that ADEQ recognized the need to establish federally enforceable limits on the Hermosa Mine's potential to emit in order to justify a finding that the source is synthetic minor for PSD purposes, the newly established conditions do not assure compliance with the applicable limits or the Arizona SIP.

To begin with, the emission limits at Condition IV.B.3.b do not appear to set forth legitimate federally enforceable limits on the Hermosa Mine's potential to emit such that they assure emissions will not exceed major source thresholds under the PSD provisions of the Arizona SIP. Although the Condition establishes ton/year limits for NO_x, CO, and VOCs, the compliance requirements under Condition IV.B.4.e require South32 to conduct only annual testing and assess compliance based on the "prior 12 months." This approach to assessing compliance means that South32 will only calculate emissions based on single 12-month block periods, rather than calculate emissions on a rolling basis. Such an approach to compliance undermines the ability of the annual limits to truly limit the Hermosa Mine's potential to emit on a yearly basis.

To illustrate, if South32 conducted testing annually on December 31, this would yield annual emissions data just for every 12-month period from December 31-December 31. This approach, however, would not yield data for other 12-month periods, such as from April 1-April 1, June 15-June 15, etc. Even if South32 could demonstrate compliance for the 12-month period from December 31-December 31, the company could exceed the annual limits during other 12-month periods without detection. For the annual limits to practically limit the Hermosa Mine's potential to emit, the Title V Permit must assure compliance on a rolling basis and ensure that emissions are limited during every yearly period the mine is operating, whether that be every 12-month period or a shorter timeframe (e.g., every 52-week or 365-day period).

Additionally, to the extent the Title V Permit limits VOC emissions from the applicable engines, the Condition IV.B.3.b states that, "when calculating emissions of [VOCs], emissions of formaldehyde should not be included." There is no basis for excluding formaldehyde from the calculation of VOC emissions and in fact this exclusion appears contrary to applicable requirements. The Arizona SIP defines VOCs as, "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions." R18-2-101(154). Formaldehyde is a compound of carbon and is therefore a VOC.[19] Although R18-2-101(154)(a)-

[18] Conditions IV.B.3.b, IV.B.4.e, and IV.B.5.d were not included in the draft Title V Permit, meaning Petitioners did not have an opportunity to comment on these provisions during the public comment period. The Conditions were added to the proposed and then final Title V Permit after the close of the public comment period. Because the grounds for objecting arose after the close of the public comment period, the Administrator has authority to review objections related to Conditions IV.B.3.b, IV.B.4.e, and IV.B.5.d. *See* 40 C.F.R. § 70.8(d).

[19] According to EPA, it is one of the "best known" VOCs. *See* EPA, "Volatile Organic Compounds' Impacts on Indoor Air Quality," website available at https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality (last accessed Sept. xx, 2024).

(hhh) of the SIP excludes certain other carbon compounds from the definition of VOCs, formaldehyde is not included in this list. Formaldehyde therefore counts towards the Hermosa Mine's potential to emit for VOCs and must be included when calculating compliance with the applicable limit.[20]

1) ADEQ's Response to Comments did not Resolve This Issue

In response to comments, ADEQ responded that it updated the permit "to reflect the manufacturer guarantee's emission limits which were also used in the emission calculations and modeling analysis." Exhibit 2, Responsiveness Summary to Public Comments at 25. While it was critical for ADEQ to include these applicable emission limits, ADEQ was also obligated to ensure the limits, particularly annual limits, established enforceable limitations on the Hermosa Mine's potential to emit that complied with applicable requirements. Unfortunately, as written, the Title V Permit does not set forth enforceable limitations on the yearly potential to emit for the engines subject to Condition IV.B and does not assure compliance with applicable requirements.

2) The Administrator Must Object

The emission limits established under Condition IV.B.3.b are not enforceable as a practical matter and do not assure compliance with applicable requirements. The limits do not effectively limit the Hermosa Mine's annual potential to emit and inappropriately exclude formaldehyde from the calculation of total VOC emissions. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

b) Attachment "B", Condition IV.B Lacks Sufficient Operation and Maintenance Requirements and Does not Require Sufficient Periodic Monitoring

Aside from the adequacy of the limits themselves, the Title V Permit also does not appear to set forth sufficient operation and maintenance requirements and sufficient monitoring that assures compliance with the limits at Condition IV.B.3.b.

Compliance with the newly established emission limits is premised upon South32 installing and operating add-on controls to the engines. Specifically, Condition IV.B.2.a requires South32 to "install selective catalytic reduction (SCR) and oxidation catalysts (OxCat) on the natural gas engines and interlock all engines to ensure that the associated SCR and OxCat will operate at all times[.]"[21] Unfortunately, as Petitioners commented, this Condition sets forth no

[20] While the NSPS at 40 C.F.R. § 60, Subpart JJJJ, Table 1 excludes formaldehyde from applicable VOC limits, these NSPS limits are not meant to establish federally enforceable limits on the Hermosa Mine's potential to emit. Given that total VOC emissions count toward whether the Hermosa Mine is a major or synthetic minor source under the Arizona SIP, all VOC emissions, including formaldehyde emissions, must be counted for purposes of compliance with the applicable limits at Condition IV.B.3.b.

[21] Petitioners presume the use of SCR will reduce NO_x emissions and the use of an OxCat will reduce CO emissions.

requirements or limitations for the operation and maintenance of the SCRs and OxCats that would ensure these add-on controls operate effectively and limit emissions at all times to at or below the applicable limits. While Condition IV.B.4 sets forth "compliance requirements," there are no compliance requirements that apply specifically to the SCRs and OxCats that would assure compliance with any particular standards or requirements related to operation and maintenance. Further, although Condition IV.B.5 sets forth testing requirements, there are no testing or monitoring requirements that apply specifically to the SCRs and OxCats such that the Title V Permit sets forth sufficient periodic monitoring that assures these controls operate effectively at all times.

A lack of operation and maintenance requirements and monitoring to assure proper operation and maintenance of the SCRs and OxCats is concerning given that it is expected these add-on controls will need to significantly reduce emissions in order to maintain the Hermosa Mine's status as a synthetic minor source. As Petitioners noted in their comments, based on the applicable emission rates under 40 C.F.R. § 60, Subpart JJJJ, operation of the 58 CAT 3520 DSL engines would have the potential to emit nearly 2,000 tons of NO_x annually. *See* Exhibit 1, Comments on Draft Title V Permit at 35-36. Based on the applicable limits now set forth in the Title V Permit at Condition IV.B.3.b, NO_x emissions would be controlled by more than 90% with the SCRs. If controls are not maintained properly and fail to operate effectively at all times, actual emissions could easily exceed applicable limits.

Compounding a lack of operation and maintenance requirements for the add-on emission controls is that Condition IV.B does not set forth sufficient periodic monitoring that assures compliance with the applicable emission limits. Condition IV.B.4.c requires South32 to demonstrate compliance with Condition IV.B.3.b by "testing annually pursuant to Condition IV.B.5[.]" While Condition IV.B.5.c sets for procedures and methods for testing emissions, it is not clear how testing only once annually is sufficiently frequent enough to assure compliance with the applicable limits, particularly the hourly limits. The TSD does not explain why annual testing was determined to be sufficient, simply identifying "Conduct annual performance tests" as the applicable monitoring requirements. Exhibit 7, TSD at 21. Given that the Title V Permit does not set forth operation and maintenance requirements for the SCRs and OxCats and sets forth no monitoring to ensure proper operation and maintenance of the emission controls, more frequent emissions testing appears necessary to ensure continuous compliance and assure sufficient periodic monitoring as required by Title V of the Clean Air Act.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over a lack of operation and maintenance requirements for the SCRs and OxCats, as well as a lack of monitoring to assure effective operation and maintenance, ADEQ responded:

> There is the operation requirement of SCR and OxCat in the permit. All engines are required to be interlocked, and the interlock automatically requires the SCR and OxCat to operate when the temperature at the catalyst achieves the manufacturer's minimum design temperature. This is the basic requirement to ensure that the units are operated properly and controls applied. Also when a control device is purchased it will have the

> manufacturer's instructions and operating specifications which operators will need to follow to ensure the control device works effectively.

Exhibit 2, Responsiveness Summary to Public Comments at 24. This response indicates that the SCRs and OxCats will need to be operated according to manufacturer's instructions and operating specifications to work effectively. However, the Title V Permit does not actually require that the SCRs and OxCats operate according to manufacturer's instructions and operating specifications and requires no monitoring to assure that the SCRs and OxCats are operated according to manufacturer's instructions and operating specifications. Further, it is not clear what those instructions and operating specifications actually state and whether they are, in fact, sufficient to ensure proper and effective control of emissions at all times.

ADEQ responded generally to Petitioners' concerns that "performance testing is infrequent across the proposed air quality permit," stating:

> The Department has determined the frequency of performance testing based on emissions, limitations and/or air pollution controls. In the mining industry, annual performance testing, or performance testing every two (2) to three (3) years, or even once per permit term which is five (5) years, is common. Therefore, the performance testing frequency stipulated in the proposed air quality permit is reasonable for ongoing demonstrations of compliance with emission limitations.

Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides little insight as to whether the frequency of testing required by Conditions IV.B is sufficient under Title V. Although performance testing every two to three years, or even once every five years, may be "common" in the mining industry, a determination of sufficient monitoring is source-specific. It is difficult to understand how ADEQ could broadly conclude that simply because testing may be less frequent within "the mining industry," it is appropriate for the Hermosa Mine and its unique equipment, geology, and other factors that influence particulate matter emissions.

2) The Administrator Must Object

The Title V Permit does not set forth operation and maintenance requirements to ensure the SCRs and OxCats operate effectively at all times and does not set forth sufficient periodic monitoring to assure proper operation and maintenance of controls and to assure compliance with the applicable limits in Condition IV.B.3.b. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to assure compliance with applicable requirements.

6. Attachment "B", Condition VII

This Condition sets forth applicable limitations and requirements for "unclassified sources," which appear to be emission units that are subject to standards of performance set forth in the Arizona SIP at R18-2-730. Unfortunately, the Title V Permit does not set forth enforceable emission limits that assure compliance with the SIP and does not set forth sufficient

periodic monitoring that assures compliance. Petitioners commented on Condition VII on pages 41-46 of their technical comments.

a) Attachment "B", Condition VII.B

This Condition establishes emission limits for the "unclassified sources," but it is not possible to understand how these limits apply, what limits actually apply, how applicability is established, or where emissions are released from any subject equipment or activities.

Of primary concern is that Condition VII.B.1.a does not actually set forth the applicable particulate emission limits. Instead, the Condition simply incorporates R18-2-730(A)(1), which requires applicable sources to establish maximum allowable hourly particulate matter emission limits using certain equations. As Petitioners stated in their comments, the Title V permit cannot simply restate these equations to establish applicable emission limits for sources subject to Condition VII.B. Exhibit 1, Comments on Draft Title V Permit at 41.

ADEQ was required to identify which sources are subject to the applicable equations and do the math to establish applicable particulate matter limits in the Title V permit. It was not sufficient under Title V to simply reprint equations set forth in regulatory text without actually explaining how the regulations specifically apply to each applicable emission unit. A Title V Permit must "include enforceable limitations and standards." 42 U.S.C. § 7661c(a). A permit cannot just refer to equations required to be utilized to establish enforceable limitations and standards. Fundamentally, the fact that the Title V Permit simply restates equations renders Condition VII.B.1 unenforceable and contrary to Title V permitting requirements.

This is especially true given that it is not clear how the equations would actually apply to any piece of equipment or activity subject to Condition VII.B. Condition VII.B.1.a(1) applies based on a source's "process weight rate." Condition VII.B.1.a(1) explains that for sources having a "process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation: $E = 4.10[P]^{0.67}$," and for sources with a process weight of greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions are determined by the equation "$E = 55.0P^{0.11}$," where E = the maximum particulate limit and P = the process weight rate.[22] Here, it is not clear what "process weight rate" refers to. Without an explanation as to what "process weight rate" actually refers to, it is not clear what the applicable particulate limit actually is.

The problem of a lack of specificity under Condition VII.B.1.a(1) is compounded by an erroneous definition of "process weight rate" in the Arizona SIP. A.A.C. R18-2-701(41) defines "process weight rate" as "a rate established pursuant to R18-2-702(E)." However, A.A.C. R18-2-702(E) relates to the process of ADEQ approving alternative opacity limits for applicable

[22] The equation set forth in Condition VII.B.1.a(1) of the final Title V Permit states "$E = 4.10e^{0.067}$," but it appears that the variable, "*e*," was mistakenly inserted and should actually be the variable, "*P*."

sources and does not speak to "process weight rate." It is actually A.A.C. R18-2-702(F) of the Arizona SIP that speaks to the meaning of "process weight rate," stating:

> For continuous or long run, steady-state process sources, the process weight rate is the total process weight for the entire period of continuous operation, or for a typical portion of that period, divided by the number of hours of the period, or portion of hours of that period.
>
> For cyclical or batch process sources, the process weight rate is the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during the period.

A.A.C. R18-2-702(F)(1) and (2). Here, the SIP makes clear that the "process weight rate" is not a constant, but rather a carefully calculated variable that depends on whether a source is "steady-state" or "cyclical" and on total process weight during appropriate activities and time periods. The Title V Permit does not even acknowledge A.A.C. R18-2-702(F) or attempt to establish any definition that is functionally equivalent.

Given that the correct definition of "process weight rate" under the Arizona SIP is source-specific, the Title V Permit must define "process weight rate" by source, or emission unit, to ensure the enforceability of Condition VII.B.1.a.(1). It does not. This means it is not possible, based on the Title V Permit and the TSD, to discern what the variable "*P*" under A.A.C. R18-2-730 actually means and what particulate matter limits actually apply. This further underscores that Condition IVII.B.1.a(1) is not enforceable as a practicable matter and does not assure compliance with applicable requirements.

Furthermore, for applicable equipment that do not have mass throughput, it is not clear how this calculation is even calculated. Attachment "C" of the Title V Permit, for example, lists the "max. capacity" for the "WTP2 Cooling Towers," the "Surface Refrigeration Plant," and the "Evaporators," all of which are subject to A.A.C. R18-2-730, in gallons per minute, a volumetric throughput. Neither the Title V Permit nor the TSD set forth or reference any information or analysis indicating how specific volumetric throughput data is to be accurately converted to mass throughput for purposes of ensuring compliance with A.A.C. R18-2-730 and Condition VII.B.1.[23]

Condition VII.B.1.b establishes a 20% opacity limit for the equipment or activities subject to Condition VII. Unfortunately, it is not clear how this limit would apply to the equipment or activities subject to Condition VII and whether Condition VII.B.1.b assures compliance with applicable requirements. The Condition states that opacity is limited "from the

[23] For one emission unit subject to A.A.C. R18-2-730 listed in Attachment "C," the "Caustic Scrubber," the Title V Permit simply states "N/A" for "max. capacity." It is not clear from the Title V Permit or TSD how "process weight rate" is determined based on a throughput of "N/A."

stack of any affected sources," but it is not clear from the Title V Permit what the stack of each affected source is. For example, for the "Surface Refrigeration Plant," Attachment "C" of the Title V Permit lists four cooling towers and four "UG Refrigeration CT Cells" as subject to A.A.C. R18-2-730, but it is not clear where the stacks of these affected sources are located and how opacity will be observed in order to assure compliance with the applicable limit. Similarly, Attachment "C" identifies the "Tailings Transfer Conveyor No. 1 and 2," "Tailings Silo Feed Conveyor," "Tailings Paste Plant Feed Conveyor," "Tailings Truck Loading Conveyor," "Tailings Silo Reclaim Feeder" and "Tailings Filter Discharge Feeder No. 1-4" as subject to A.A.C. R18-2-730, but the Title V Permit does not explain where these emission units are located, where visible emissions could be released, and how the 20% opacity limit would apply to these specific applicable units. Additionally, for the "WTP2 Cooling Towers" listed in Attachment "C," South32's application asserts that emissions form these units are "fugitive." Exhibit 10, South32 Hermosa Mine Permit Application, Appendix A at 21. Although Petitioners question this assertion, if emissions are "fugitive" in nature (i.e., could not pass through a stack or functionally equivalent opening), it is not clear how the opacity limit would apply to these units.

The applicable authority for Condition VII.B.1.b is identified as R18-2-702(B)(3), which states that "the opacity of any plume or effluent from a source" shall not be greater than 20%. To ensure the enforceability of Condition VII.B.1.b, the Title V Permit must identify where the "plume or effluent" of an applicable emission unit or activity is located and make clear that the opacity limit applies with regards to the release of air pollution from that location. Otherwise, the Condition is not enforceable given the lack of detail about how the opacity limit applies to the "unclassified sources" and how compliance is to be measured for the equipment or activities subject to Condition VII.

Finally, while Condition VII.B.1.c provides that if the presence of uncombined water is the only reason for an opacity exceedance, the exceedance shall not constitute a violation of the applicable opacity limit, the Title V Permit provides no monitoring of "uncombined water" that would assure compliance with the Condition. In order for this exemption to be legitimately applied in accordance with the Arizona SIP, the Title V Permit must set forth sufficient monitoring of "uncombined water" in order to verify the presence of "uncombined water" and its contribution to any exceedance of the 20% opacity limit. Without monitoring, this exemption is not enforceable and does not assure compliance with applicable requirements.

1) ADEQ's Response to Comments did not Resolve This Issue

In response to Petitioners' concerns that Condition VII.B.1.a does not assure compliance with applicable particulate matter limits, ADEQ responded, "The language is directly from the applicable regulations, and it is not clear why a Title V permit cannot rely on the applicable regulations." Exhibit 2, Responsiveness Summary to Public Comments at 20. Based on this response, it is clear that ADEQ does not understand that a Title V Permit must set forth applicable limitations and standards. While ADEQ is absolutely correct that language in Condition VII.B.1.a is directly from the applicable regulations at A.A.C. R18-2-730 apply, without actually completing the equations to establish applicable limits, the Title V Permit does

not set forth enforceable emission limitations and standards. Given that Title V permits "shall include enforceable emission limitations and standards," it cannot suffice to simply restate an equation, particularly ones that rely on specific variables that vary based on type of source and activity rates. ADEQ did not otherwise respond to concerns that some applicable emission points do not have identified mass-based throughput capacities, which appears to make Condition VII.B.1.a unenforceable as it relates to these sources.

With regards to Petitioners' comments regarding the enforceability of the opacity limit at Condition VII.A.1.b, is not clear whether ADEQ responded to concerns over its applicability and enforceability in its response to comments. There is no direct response to the concerns raised by Petitioners in their comments. Indirectly, ADEQ addresses a concern about "where the stacks will be located." Exhibit 2, Responsiveness Summary to Public Comments at 21. ADEQ responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." *Id*. While the Title V Permit indicates that some emissions sources have emission exhaust points, it does not appear to comprehensively indicate which sources have stacks such that it is understood how A.A.C. R18-2-730 applies and how South32 will assure compliance with the opacity limit at Condition VII.B.1.b.

Finally, with regards to comments over sufficient monitoring of "uncombined water" and compliance with Condition VII.B.1.c, ADEQ addressed initial concerns expressed by Petitioners regarding the definition of "uncombined water," but did not otherwise address Petitioners' concerns regarding a lack of monitoring. ADEQ states:

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

Exhibit 2, Responsiveness Summary to Public Comments at 17. While it was helpful for ADEQ to identify the specific definition of "uncombined water," the agency did not otherwise address whether the Title V Permit provides sufficient periodic monitoring of "uncombined water" such that Condition VII.B.1.c can be appropriately applied and enforced.

2) The Administrator Must Object

Condition VII.B.1 is unenforceable as a practical matter and fails to assure compliance with applicable requirements. The Condition does not establish applicable particulate limits or ensure their enforceability and does not provide sufficient detail and information from which to understand how the applicable opacity limits will apply and be enforced. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and assure compliance with applicable requirements.

b) Attachment "B", Conditions VII.C.6 and VII.C.7

Condition VII.C sets forth operating requirements for units subject to Condition VII and A.A.C. R18-2-730, but it is not enforceable as a practical matter due to vague and ambiguous wording and a lack of specificity. Of particular concern are Conditions VII.C.6 and VII.C.7, which relate to cyanide emissions.

Condition VII.C.6 authorizes the discharge of hydrogen cyanide from units subject to Condition VII, limiting emissions to no more than "0.3 parts per million by volume for any averaging period of eight hours." In comments on the draft Title V Permit, Petitioners noted that it is not clear what emission units subject to Condition VII actually emit hydrogen cyanide and from where, making it impossible to understand how this Condition applies and can be enforced.

Compounding the lack of enforceability is that the Title V Permit requires no monitoring of hydrogen cyanide emissions to assure compliance with the 0.3 parts per million by volume limit. Although Condition VII.E purports to set forth "Monitoring Recordkeeping, and Reporting Requirements" for units subject to Condition VII, the provisions of this Condition do not require any specific testing or monitoring of hydrogen cyanide from any applicable unit.

Condition VII.C.7 authorizes the discharge of sodium cyanide dust or dust from any other solid cyanide from units to no more than "140 micrograms per cubic meter for any averaging period of eight hours." Again, it is not clear what emission units subject to Condition VII actually emit sodium cyanide dust or dust from solid cyanide and from where, making it impossible to understand how this Condition applies and can be enforced.

Compounding the lack of enforceability is that the Title V Permit requires no monitoring of cyanide dust or dust from any other solid cyanide to assure compliance with the 140 micrograms per cubic meter limit. Although Condition VII.E purports to set forth "Monitoring Recordkeeping, and Reporting Requirements" for units subject to Condition VII, the provisions of this Condition do not require any specific testing or monitoring of sodium cyanide dust or any other solid cyanide from any applicable unit.

1) ADEQ's Response to Comments did not Resolve This Issue

In response to Petitioners' concerns, ADEQ responded, "The facility will not be storing sodium cyanide in solid form and additionally, there is no significant potential for hydrogen cyanide emissions. Consequently, no monitoring or testing requirements are stipulated." Exhibit 2, Responsiveness Summary to Public Comments at 28.

It is true that South32's application states that solid cyanide pellets are converted to solution before being handled at the Hermosa Mine. *See* Exhibit 10, South32 Hermosa Mine Permit Application at 9-11. However, nothing in the company's application or the Title V Permit expressly states that there will be absolutely no storage or handling of solid cyanide. In fact, South32 explicitly states in its application that solid cyanide pellets will be transported via truck to the Hermosa Mine. *Id*. at 4-7. Regardless, with the inclusion of Condition VII.C.7, the

Title V Permit expressly authorizes the handling of solid cyanide at the Hermosa Mine, so long as the applicable emission limits are met. Given this, the Title V Permit must require monitoring to assure compliance. If South32 is not storing or handling solid cyanide, then monitoring may simply be a matter of recordkeeping. However, if solid cyanide is handled, the Title V Permit must set forth sufficient monitoring to assure compliance with the applicable limit.

With regards to hydrogen cyanide emissions, there is no information or analysis cited or presented by ADEQ that indicates that "there is no significant potential" for emissions. South32's application indicates cyanide and cyanide compounds will be utilized in mining operations. *See* Exhibit 10, South32 Hermosa Mine Permit Application at 4-7—4-8. Indeed, Attachment "C" of the Title V Permit includes the emission units, "Zink Cyanide Mix Tank" and "Zinc Cyanide Holding Tank," both of which are subject to A.A.C. R18-2-730, clearly indicating cyanide will be utilized. Although hydrogen cyanide emissions may be minimal, the Title V Permit expressly authorizes such emissions provided that applicable limits are met. Accordingly, the Title V Permit must set forth sufficient periodic monitoring to assure compliance. Especially given that the applicable limit is a concentration-based limit, rather than a mass-based limit, the release of seemingly insignificant amounts of hydrogen cyanide could exceed the applicable limit.

2) The Administrator Must Object

The Title V Permit fails to set forth sufficient periodic monitoring that assures compliance with the applicable cyanide limits set froth at Conditions VII.C.6 and 7. ADEQ's response to Petitioners' comments did not resolve this issue. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring and assure compliance with applicable requirements.

c) Attachment "B", Condition VII.D

Condition VII.D.1 requires South32 "to the extent practicable, maintain and operate WTP1LS [Waste Water Treatment Plant #1 Lime Silo] according to the manufacturer's specifications and in a manner consistent with good air pollution control practices for minimizing particulate matter emissions." This Condition is unenforceable as a practical matter and contrary to applicable requirements.

For one, as explained thoroughly in prior sections above, the use of the phrase "to the extent practicable" renders the Condition unenforceable as it authorizes South32 to not maintain and operate the Waste Water Treatment Plant #1 Lime Silo consistent with applicable requirements. The phrase "to the extent practicable" conveys complete discretion, meaning Condition VII.D.1 expressly authorizes South32 not to operate WTP1LS according to the manufacturer's specifications and in a manner consistent with good air pollution control practices for minimizing particulate matter emissions.

Even if the phrase "to the extent practicable" could be defined so as to establish enforceable sideboards, its inclusion in the Title V Permit is fundamentally contrary to applicable requirements. The Arizona SIP at R18-2-730 does not contain the phrase "to the extent

practicable." Further, the authorities cited for Condition VII.D.1—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(e)—also do not include or reference the phrase. Its discretionary inclusion in Condition VII.D.1 of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

Second, manufacturer's specifications are not incorporated into the Title V permit or specifically referenced. It is not clear whether the manufacturer's specifications are actually sufficient to assure effective minimization of particulate matter emissions. Because of a lack of specificity in the Title V Permit, these manufacturer's specifications are also unenforceable. It simply not possible to understand what the manufacturer's specifications are in order to understand whether South32 is complying with Condition VII.D.1.

Condition VII.D.2 requires South32 to "at all times [] install, maintain, and operate the Dust Collector WTP1LS, and to the extent practicable, to control the particulate matter emissions form the Waste Water Treatment Plant #1 Lime Silo." This Condition is unenforceable as a practical matter and contrary to applicable requirements.

The use of the phrase "to the extent practicable" renders the Condition unenforceable as it authorizes South32 to not install, maintain, and operate the Dust Collector WTP1LS consistent with applicable requirements, including applicable particulate matter limits set forth at Condition VII.B.1. As discussed in prior sections above, the phrase "to the extent practicable" conveys complete discretion, meaning to the extent Condition VII.D.2 requires South32 to control particulate matter emissions, it requires control only "to the extent practicable."

Even if the phrase "to the extent practicable" could be defined so as to establish enforceable sideboards, its inclusion in the Title V Permit is fundamentally contrary to applicable requirements. The Arizona SIP at R18-2-730 does not contain the phrase "to the extent practicable." Further, the authorities cited for Condition VII.D.1—A.A.C. R18-2-306.01(A) and A.A.C. R18-2-331(A)(3)(d) and (e)—also do not include or reference the phrase. Its discretionary inclusion in Condition VII.D.2 of the Title V Permit therefore undermines the enforceability of the Arizona SIP, contrary to applicable requirements and Title V of the Clean Air Act.

1) ADEQ's Response to Comments did not Resolve This Issue

With regards to Petitioners' concerns over the inclusion of the phrase "to the extent practicable" in Condition VII.D, ADEQ responded that the phrase is a "common" phrase "utilized in state and federal rules" and that it appears "in the Arizona Administrative Code as well as the Code of Federal Regulations." Exhibit 2, Responsiveness Summary to Public Comments at 13. As an example, ADEQ stated that the phrase is included in the "New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP)." *Id*.

While ADEQ is correct that the phrase "to the extent practicable" makes appearances in the Arizona Administrative Code and the Code of Federal Regulations, including in some portions of the NSPS and NESHAP, this response does not address the effect that the phrase has

on the enforceability of Condition VII.D. Simply because the phrase "to the extent practicable" may make appearances in state and federal regulations does not make its inclusion in Condition VII.D of the Title V Permit appropriate or justified.

ADEQ further stated that the phrase "to the extent practicable" will "ensure the facility will implement the latest processes, controls, and/or technologies available within the mining industry that make a commitment to reduce air pollution." Exhibit 2, Responsiveness Summary to Public Comments at 14. It is unclear what this response actually means, but ADEQ appears to believe that inclusion of the phrase "to the extent practicable" in the Title V Permit will assist the mining industry in fulfilling its commitment to reduce air pollution. Contrary to this belief, from a practical standpoint, the inclusion of the phrase "to the extent practicable" in Condition VII.D will only allow South32 to renege on commitments to control air pollution at all times from the Waste Water Treatment Plant #1 Lime Silo. The phrase expressly provides discretion for South32 to operate the Hermosa Mine inconsistent with the representations made in its application and contrary to the applicable limits at Condition VII.B.1.

2) The Administrator Must Object

Conditions VII.D.1 and VII.D.2 are unenforceable as a practical matter and contrary to applicable requirements given the inclusion of the phrase "to the extent practicable" and the failure of Condition VII.D.1 to provide sufficient information and detail to understand how the Condition applies and how compliance is assured. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth enforceable emission limitations and standards and comply with applicable requirements.

d) Attachment "B", Condition VII.E

While Condition VII.E purports to set forth "Monitoring, Recordkeeping, and Reporting Requirements," the Condition does not assure sufficient periodic monitoring that assures compliance with the applicable limits set forth under Condition VII.

Condition VII.E.2 requires monthly opacity monitoring in accordance with Condition II.B for all units subject to Condition VII. However, as discussed in prior sections above, Condition II.B does not set forth sufficient periodic monitoring that assures continuous compliance with the applicable opacity limit of 20%.

To begin with, Condition II.B.3.c only requires quantitative opacity monitoring if there is the "appearance" of opacity that is greater than the applicable standard. The word "appearance" is an extremely subjective term and provides no meaningful or enforceable standard for requiring quantitative opacity monitoring. It is not clear who or what is "observing," whether that person (or thing, as the case may be) is qualified to "observe," from what location, or what specific qualitative parameters are actually being observed such that the "appearance" of opacity can be accurately gauged. Emissions could "appear" to exceed the applicable standard for one observer, yet the same emissions could "appear" not to exceed the applicable standard for another observer. While the Title V Permit cannot rely on qualitative monitoring to demonstrate

compliance with the applicable quantitative 20% opacity limit, in this case the Title V Permit allows South32 to completely forego quantitative monitoring of opacity on the basis of qualitative observations of the "appearance" of opacity. This is not sufficient periodic monitoring.

Further, to the extent that quantitative monitoring may occur, it must be conducted by an "EPA Reference Method 9 certified observer," but the Title V Permit at Condition II.B.2 does not require a certified observer to be on site, only "on call." This clearly suggests that certified observers are likely to not be on site in the event of visible emissions requiring Method 9 observations, meaning it is likely not possible to conduct the "immediate" observation required by Condition II.B.3.c. Given that compliance with the 20% opacity limit under Condition VII.B.1 relies entirely on observations by certified Method 9 observers, the Title V Permit cannot rely on "on call" observers who are not on-site to conduct the required "immediate" observations to determine compliance.

Beyond the adequacy of Condition II.B.2, Petitioners' also flagged issues with Condition III.A.4.b, namely related to the location of any opacity monitoring and the frequency of monitoring.

With regards to location Condition VII.E.2 does not explain what units are specifically subject to Condition VII and where opacity is specifically to be monitored at the units subject to Condition VII. As Petitioners detailed above, Condition VII.B.1.b does not provide sufficient information upon which to understand how the applicable opacity limit applies and where. Given this, Condition VII.E.2 also does not set forth sufficient periodic opacity monitoring because it is not clear how and where monitoring is to be conducted in relation to the specific emission units subject to Condition VII.

With regards to frequency, it is not clear how monthly observations of visible emissions required by Condition VII.E.2 represents sufficiently periodic monitoring for every single unit subject to Condition VII. Given that the emission units and processes subject to the applicable opacity standard, which applies at all times, are involved in the handling and processing of raw materials, including tailings, in a heavy industrial setting, emissions are likely to be variable and equipment and processes could be subject to regular variations that could affect performance. Monthly opacity monitoring is not frequent enough to assure sufficient periodic monitoring that assures compliance with the applicable opacity limit.

1) ADEQ's Response to Comments did not Resolve This Issue

ADEQ does not appear to have responded to Petitioners' comments regarding how the opacity limits apply to specific emission units and where and how opacity monitoring is to take place in relation to the emission units subject to Condition VII. ADEQ does respond to a general comment regarding "where the stacks will be located" and responds, "Conditions across the proposed air quality permit indicate whether an emissions source has a stack." Exhibit 2, Responsiveness Summary to Public Comments at 21. This generic response provides no insight as to how opacity limits apply and how opacity will be measured in order to assure compliance in relation to the units subject to Condition VII.

With regards to comments over whether Condition VII.E requires sufficient periodic monitoring of opacity, ADEQ responded generally to Petitioners' concerns, stating:

> Condition II.B of Attachment "B" requires the facility to conduct instantaneous surveys or six-minute observations by a certified observer. At the frequency specified in the proposed air quality permit, the facility is expected to conduct instantaneous surveys. If visible emissions are observed and evaluated against the applicable opacity standard, the result must be documented. If an opacity standard is exceeded, the facility must "adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard". The Department believes these conditions are appropriate and abide by applicable regulatory requirements.

This response does not address Petitioners' concerns that the Title V Permit actually allows South32 to forego quantitative opacity monitoring on the basis of the qualitative "appearance" of opacity being less than the quantitative standard. This response does not address concerns that the term "appearance" is ambiguous and unenforceable and that while "instantaneous surveys" of the "appearance" of opacity may be required, such surveys do not assure compliance with the applicable 20% limit, which can only be determined via Method 9 observations. ADEQ also did not respond to Petitioners' concerns that a certified Method 9 observer does not have to be on site, but rather only "on call." Overall, ADEQ did not respond to Petitioners' concerns that Condition II.B.2 does not set forth sufficient periodic monitoring of opacity such that it assures compliance with the applicable limit at Condition VII.B.1.b.

With regards to Petitioners' concerns over the frequency of opacity monitoring under Condition VII.E.2, ADEQ responded:

> As explained earlier in the responsiveness summary, ADEQ takes into account the expected level of emissions, the general duty clauses that govern air pollution control principles while defining monitoring frequencies. In this instance, ADEQ has determined that a monthly opacity monitoring scheme is acceptable.

Exhibit 2, Responsiveness Summary to Public Comments at 28. This response provides little specific insight. While accounting for the expected level of emissions may be an appropriate consideration for the frequency of monitoring, it is not clear how ADEQ determined that the expected level of emissions in this case justified monthly opacity monitoring. ADEQ also indicates it accounted for "general duty clauses that govern air pollution control principles while defining monitoring frequency," but it is not clear how any "general duty clause" was exactly taken into consideration when establishing appropriate monitoring frequency and how monthly monitoring across the board for all units subject to Condition VII was deemed "acceptable."

ADEQ's response is all-the-more confusing because several units subject to Condition VII appear very similar in nature to units subject to Attachment "B," Condition III of the Title V Permit, which requires weekly opacity monitoring.[24] These units include:

[24] As discussed in prior sections above, weekly opacity monitoring for units subject to Attachment "B," Condition III is not sufficiently frequent under Title V. However, the fact that the Title V Permit requires weekly monitoring

- Tailings Weigh Bin; ID No. 22540-BN-00001. Although this unit is subject to A.A.C. R18-2-730, it is listed in Attachment "C" among other "Bins/Silos" subject to 40 C.F.R. § 60, Subpart LL. The Title V Permit requires weekly opacity monitoring for units subject to 40 C.F.R. § 60, Subpart LL.

- Tailings Transfer Conveyor No. 1, Tailings Transfer Conveyor No. 2, Tailings Silo Feed Conveyor, Tailings Paste Plant Feed Conveyor, Tailings Truck Loading Conveyor; ID Nos. 22540-CV-00001, 22540-CV-00002, 22540-CV-00010; 22540-CV-00003; 22540-CV-00005. Although these units are subject to A.A.C. R18-2-730, they are listed in Attachment "C" among other "Conveyors" subject to 40 C.F.R. § 60, Subpart LL. The Title V Permit requires weekly opacity monitoring for units subject to 40 C.F.R. § 60, Subpart LL.

- Tailings Silo Reclaim Feeder, Tailings Filter Discharge Feeder No. 1, Tailings Filter Discharge Feeder No. 2, Tailings Filter Discharge Feeder No. 3, Tailings Filter Discharge Feeder No. 4; ID Nos. 22540-FE-00001, 22530-CH-00020, 22530-CH-00021; 22530-CH-00022; 22530-CH-00023. Although these units are subject to A.A.C. R18-2-730, they are listed in Attachment "C" among other "Feeders/Chutes" subject to 40 C.F.R. § 60, Subpart LL. The Title V Permit requires weekly opacity monitoring for units subject to 40 C.F.R. § 60, Subpart LL.

Here, ADEQ's determination that monthly opacity monitoring is sufficiently frequent does not appear based on consideration of these specific units and their similarities to other units where more frequent monitoring is required.

2) The Administrator Must Object

Condition VII.E does not set forth sufficient periodic monitoring of opacity that assures compliance with the applicable opacity limit set forth at Condition VII.B.1.b. ADEQ's response to Petitioners' comments did not resolve this issue or otherwise provide any additional insight. The Administrator must object over the failure of the Title V Permit to set forth sufficient periodic monitoring that assures compliance with applicable requirements.

CONCLUSION

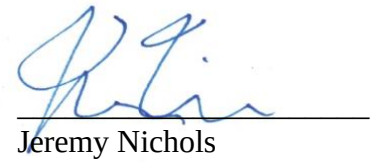
Pursuant to 42 U.S.C. § 7611d(b)(2) and 40 C.F.R. § 70.8(d), the EPA must object to the issuance of the Title V Permit for the Hermosa Mine in Santa Cruz County, Arizona. As this Petition demonstrates, the Title V Permit fails to assure compliance with applicable requirements under the Clean Air Act and applicable requirements under Title V. Most significantly, ADEQ improperly categorized non-fugitive emissions as fugitive, asserting an erroneous potential to emit that does not comply with the Arizona SIP. The Title V Permit also contains numerous terms and conditions that are unenforceable as a practical matter, that fail to set forth sufficient

in Condition III is relevant for determining whether Condition VII.E.2 sets forth sufficient periodic opacity monitoring.

periodic monitoring, and that fail to assure compliance with applicable requirements, particularly the federally enforceable limits on the Hermosa Mine's potential to emit that are meant to ensure emissions remain below major source thresholds for PSD purposes. Accordingly, Petitioners requests that the Administrator object to the Title V Permit and require ADEQ to revise and reissue the Permit in a manner that complies with the requirements of the Clean Air Act.

DATED: September 12, 2024

Respectfully submitted,



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