

**BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

IN THE MATTER OF	)	
<b>DOE RUN COMPANY</b>	)	VII-1999-001
<b>BUICK MINE AND MILL</b>	)	ORDER RESPONDING TO PETITIONER'S
	)	REQUEST THAT THE ADMINISTRATOR
PERMIT No. 2200-0005-010	)	OBJECT TO ISSUANCE OF A STATE
ISSUED BY THE MISSOURI	)	OPERATING PERMIT
DEPARTMENT OF NATURAL	)	
RESOURCES	)	
_____	)	

**ORDER GRANTING IN PART AND DENYING IN PART PETITION FOR OBJECTION TO PERMIT**

On October 4, 2000, the Environmental Protection Agency (“EPA”) received a petition from the Sierra Club - Ozark Chapter (“Petitioner”) requesting that EPA object to the issuance of a state operating permit issued to Doe Run Buick Mine and Mill (“Doe Run”) pursuant to title V of the Clean Air Act (“CAA” or “the Act”), 42 U.S.C. §§ 7661-7661f, CAA §§ 501-507. The Doe Run permit was issued by the Missouri Department of Natural Resources (“MDNR” or “permitting authority”), on August 10, 2000, pursuant to title V of the Act, the federal implementing regulations, 40 C.F.R. Part 70; and the State of Missouri implementing regulations, 10 CSR 10-6.065.

The petition alleges that the Doe Run permit: (1) contains a number of inadequate or unclear monitoring conditions, (2) lacks an appropriate Statement of Basis, and (3) does not assure compliance with all applicable requirements as mandated by 40 C.F.R. §§70.1(b) and 70.6(a)(1) because many individual permit conditions are not practically enforceable and lack adequate periodic monitoring. Petitioner has requested that EPA object to the issuance of the

Doe Run permit pursuant to section 505(b)(2) of the Act, 42 U.S.C. § 7661d (b)(2), for these reasons.

Based on a review of all the information, including the Doe Run permit, the permit application, and Statement of Basis, additional information provided by the permitting authority in response to inquiries (the Response to Comments Document), and the information in the petition, EPA grants the Petitioner's request in part and denies the remainder of the request for the reasons set forth below.

In addition, because of serious flaws in the title V permit, not specifically raised by Petitioner, but identified by EPA during its petitioned review of the Doe Run permit, EPA Region 7 will call upon the permitting authority to "reopen for cause" pursuant to 40 C.F.R. §70.7(g), to assure compliance with the applicable requirements. Interested parties will have an opportunity to comment and request a hearing on these specific "reopen for cause" changes, as appropriate, pursuant to 40 C.F.R. §70.7(h).

## **I. STATUTORY AND REGULATORY FRAMEWORK**

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a (d)(1), requires each state to develop and submit to EPA an operating permit program to meet the requirements of title V. EPA granted full approval to the title V operating permit program submitted by the State of Missouri effective June 13, 1997. See 62 Fed. Reg. 26405 (May 14, 1997) and 40 C.F.R. Part 70, Appendix A. Major stationary sources of air pollution and other sources covered by title V are required to obtain an operating permit that includes emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the Act. See CAA §§ 502(a) and 504(a); 42 U.S.C. §§ 7661a (a) and 7661c (a) .

The title V operating permit program does not generally impose new substantive air quality control requirements (which are referred to as "applicable requirements"), but does require that permits contain monitoring, record keeping, reporting, and other compliance requirements to assure compliance by sources with existing applicable requirements. See 57 Fed. Reg. 32250, 32251 (July 21, 1992). One purpose of the title V program is to enable the source, EPA, States, and the public to better understand the applicable requirements to which the source is subject and whether the source is meeting those requirements. Thus, the title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units in a single document and that compliance with these requirements is assured.

Under sections 505(a) and (b) of the Act and 40 C.F.R. § 70.8(a) and (c), States are required to submit all operating permits proposed pursuant to title V to EPA for review and EPA will object to permits determined by the Agency not to be in compliance with applicable requirements or the requirements of 40 C.F.R. Part 70. If EPA does not object to a permit on its own initiative, section 505(b)(2) of the Act and 40 C.F.R. § 70.8(d) provide that any person may petition the Administrator, within 60 days of the expiration of EPA's 45-day review period, to object to the permit. To justify exercise of an objection by EPA to a title V permit pursuant to section 505(b)(2), a petitioner must demonstrate that the permit is not in compliance with the requirements of the Act, including the requirements of Part 70.

Petitions must, in general, be based on issues regarding the permit that were raised with reasonable specificity during the public comment period.<sup>1</sup> A petition for review does not stay the effectiveness of the permit or its requirements if the permit was issued after the expiration of EPA's 45-day review period and before receipt of the objection. If EPA objects to a permit in response to a petition and the permit has been issued, EPA or the permitting authority will modify, terminate, or revoke and reissue such a permit consistent with the procedures in 40 C.F.R. §§ 70.7(g)(4) or (5)(i) and (ii) for reopening a permit for cause.

Many of the issues raised by the petitioner address the adequacy of the monitoring in the Doe Run permit. Section 504 of the Act makes it clear that each Title V permit must include "conditions as are necessary to assure compliance with applicable requirements of [the Act], including the requirements of the applicable implementation plan" and "inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions." 42 U.S.C. §§ 7661c(a) and (c). In addition, Section 114(a) of the Act requires "enhanced monitoring" at major stationary sources, and authorizes EPA to establish periodic monitoring, record keeping, and reporting requirements at such sources. 42 U.S.C. § 7414(a).

The regulations at 40 C.F.R. §70.6(a)(3) specifically require that each permit contain "periodic monitoring sufficient to yield reliable data from the relevant time period that are

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<sup>1</sup> See CAA § 505(b)(2); 40 C.F.R. § 70.8(d). Petitioner has satisfied the requirement to have commented during the public comment period on concerns with the draft and proposed operating permits that are the basis for this petition. See Letter from Wallace McMullen to Jim Hill, MDNR Operating Permits Unit, dated March 1, 2000, and Letter from Wallace McMullen to Jon Knodel, EPA Region 7 Air Permitting and Compliance Branch, dated May 14, 2000.

representative of the source's compliance with the permit" where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of record keeping designed to serve as monitoring). In addition, 40 C.F.R. § 70.6(c)(1) requires that all Part 70 permits contain, consistent with 40 C.F.R. § 70.6(a)(3), "compliance certification, testing, monitoring, reporting, and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit." These requirements are also incorporated into Missouri's regulations at 10 CSR 10-6.065(6)(C)3.A.

Decisions by the U.S. Court of Appeals for the District of Columbia Circuit shed light on the proper interpretation of these requirements. Specifically, the court addressed EPA's compliance assurance monitoring ("CAM") rulemaking (62 Fed. Reg. 54940 (1997)) (promulgating, *inter alia*, 40 C.F.R. Part 64) in Natural Resources Defense Council v. EPA, 194 F.3d 130 (D.C. Cir. 1999), and reviewed EPA's periodic monitoring guidance under Title V in Appalachian Power Co. v. EPA, 208 F.3d 1015 (D.C. Cir. 2000).

EPA summarized the relationship between Natural Resources Defense Council and Appalachian Power and described their impact on monitoring provisions under the Clean Air Act in two orders responding to petitions under title V requesting that the Administrator object to certain permits. See In re Pacificorp's Jim Bridger and Naughton Electric Utility Steam Generating Plants, Petition No. VIII-00-1, Nov. 24, 2000 ("Pacificorp")<sup>2</sup> and In re Fort James Camas Mill, Petition No. X-1999-1, December 22, 2000.<sup>3</sup> Refer to pages 16 - 19 of the

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<sup>2</sup> See <http://www.epa.gov/region07/programs/artd/air/title5/t5memos/woc020.pdf>

<sup>3</sup> See [http://www.epa.gov/region07/programs/artd/air/title5/petitiondb/petitions/fort\\_james\\_decision1999.pdf](http://www.epa.gov/region07/programs/artd/air/title5/petitiondb/petitions/fort_james_decision1999.pdf)

Pacificorp order for EPA's complete discussion of these issues. In brief, EPA concluded that in accordance with the D.C. Circuit decisions, where the applicable requirement does not require any periodic testing or monitoring, section 70.6(c)(1)'s requirement that monitoring be sufficient to assure compliance will be satisfied by establishing in the permit "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." See 40 C.F.R. § 70.6(a)(3)(i)(B). EPA also pointed out that where the applicable requirement already requires periodic testing or instrumental or non-instrumental monitoring, the court of appeals has ruled that the periodic monitoring rule in section 70.6(a)(3) does not apply even if that monitoring is not sufficient to assure compliance. In such circumstances, EPA found, the separate regulatory standard at section 70.6(c)(1) applies instead.

## **II. PROCEDURAL BACKGROUND**

### **A. Permitting Chronology**

Doe Run submitted a title V permit application to MDNR on July 15, 1996. MDNR determined that the application was complete on August 15, 1996. Following completion of its technical review and preparation of the initial draft title V permit, MDNR published a public notice on August 31, 1997, providing for a 30-day public comment period on the draft Doe Run title V permit. Based on minor comments received from Doe Run and a major redrafting of Missouri's title V permit template, MDNR reissued the draft permit for public comment on February 6, 2000. During the 30-day comment period, Petitioner submitted comments on the draft permit. On March 8, 2000, MDNR sent a copy of its "Response to Comments" document to the Petitioner and Doe Run. Shortly thereafter, on March 22, 2000, Petitioner requested that

MDNR hold a public hearing and then later withdrew its request on April 20, 2000. MDNR transmitted the “proposed” title V permit to EPA Region 7 on June 7, 2000, for EPA’s 45-day review period. The region received the proposed permit on June 12, 2000. Absent any EPA comments, MDNR issued the final Doe Run title V permit on August 10, 2000.

#### B. Timeliness of Petition

Permitting authorities must provide at least 30 days for public comment on draft permits and give notice of any public hearing at least 30 days in advance of the hearing. See 40 C.F.R. § 70.7(h). The proposed permit is submitted to EPA for review following consideration of any comments submitted during the public comment period. The EPA then has 45 days from receipt of the proposed permit to object to its issuance should EPA determine that the permit is not in compliance with the applicable requirements. See 40 C.F.R. § 70.8(c). Pursuant to section 505(b)(2) and 40 C.F.R. § 70.8(d), any person may petition the Administrator to object to the permit within 60 days after the expiration of the EPA 45-day review period, provided the petition is based on objections to the permit that were raised with reasonable specificity during the public comment period or upon other grounds outlined in section 70.8(d). Petitioner has satisfied the requirement to base its petition on objections raised with reasonable specificity during the public comment period.

EPA’s 45-day review period for the Doe Run permit ended on July 27, 2000; the 60th day following that date was September 25, 2000. The instant petition, dated September 23, 2000, and postmarked on September 25, 2000, was received by EPA Region 7 on October 4, 2000. Accordingly, EPA finds that this petition was timely filed.

### **III. FACILITY BACKGROUND**

The Doe Run Buick Mine and Mill is a metallic mineral processing plant consisting of an underground galena (lead sulfide) and sphalerite (zinc sulfide) mine and a surface ore-concentrating mill. Generally, ore is blasted loose and is hauled to an underground crusher which breaks the rock into smaller sizes. Broken ore is then hoisted to the surface where grinding mills pulverize the ore. The resulting slurry is pumped to floatation cells where reagents cause metal-containing particles to adhere to bubbles that rise to the surface. The lead- and zinc-carrying bubbles, or froth, is skimmed, thickened and dried, and shipped as a concentrate to a smelter.

In the underground portion of the mine, Doe Run conducts drilling and blasting operations along with ore hauling, crushing, screening, and conveying. The facility also operates two batch portland cement plants that provide grout for mine stabilization. Emissions from the mining and primary crushing operations mix with ambient air circulated through the mine and are eventually released to the atmosphere through various surface-based mine ventilation shafts. Above ground, Doe Run operates a series of hoists, secondary and tertiary crushers, and screening and conveying equipment which transport broken ore to the milling building and to crushed rock storage piles. Emissions from this outdoor crushing and transport equipment are enclosed and controlled with a wet rotoclone.<sup>4</sup> Inside the fully enclosed ore concentration building, ore is further pulverized in a series of rod and ball mills and is wet slurried to the froth tanks. Following a series of thickening, filtering, and drying steps, lead- and zinc-concentrates

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<sup>4</sup> A rotoclone cleans the air by the combined action of centrifugal force and a thorough intermixing of water and dust-laden air. The dust is separated from the air by means of a water curtain. The centrifugal force exerted by rapid changes in direction of air flow causes the dust particles to penetrate a water film and become permanently trapped.



are dropped into partially enclosed storage piles and transported, via truck, to a smelter.

Emissions from equipment located in the fully- and partially-enclosed buildings are vented to the atmosphere through building ventilation louvers using natural and fan-assisted draft.

Doe Run also uses miscellaneous tanks to store mill reagents, gasoline, diesel, gear oil, engine oil, waste oil, and propane. Lastly, Doe Run operates several combustion devices, primarily fueled with propane, to provide small amounts of steam for plant heating and to heat the mine shafts.

#### **IV. ISSUES RAISED BY PETITIONER**

##### **A. Claims 1 and 3: Inadequate and Unclear Monitoring Conditions**

Under Claim 1, Petitioner alleges that the Doe Run title V permit “contains a number of inadequate and/or unclear monitoring conditions, contained throughout the document, and specifically in Conditions PW002, PW003, PW004, EU0040-001, EU0040-002, and EU0060-001.” In general, Petitioner describes five particular areas of concern. These, along with EPA’s response, are summarized in Paragraphs A.1. through A.5. below. Additionally, in Claim 3, Petitioner notes that “the proposed permit does not assure compliance with all applicable requirements mandated by 40 C.F.R. § 70.1(b) and 40 C.F.R. § 70.6(a)(1) because many individual permit conditions are not practically enforceable and lack adequate periodic monitoring.” Because of the similarity between Claims 1 and 3, EPA has consolidated its findings into one response.

##### **Paragraph A.1.**

Petitioner alleges that conditions PW002 and PW003 contain inadequate and unclear monitoring requirements. In particular, for both conditions, the permit notes that monitoring,

record keeping, and reporting shall be “appropriate” to demonstrate compliance with the applicable standards. Petitioner takes exception to the use of the term “appropriate” and contends that the vagueness of the permit conditions gives the applicant complete discretion to determine what monitoring, record keeping, and reporting is needed for a compliance demonstration. Petitioner believes that the permit should clearly state monitoring and reporting requirements that are practically enforceable. The permitting authority contends that all necessary monitoring, record keeping, and reporting is detailed in the applicable regulations and that placement of each of these requirements in the permit would be unnecessarily cumbersome.

Conditions PW002 and PW003 describe plant-wide asbestos-related requirements that apply to plant equipment when and if the facility undertakes an applicable asbestos abatement project. Condition PW002 requires Doe Run to comply with the “Asbestos Abatement Projects - Certification, Accreditation, and Business Exemption Requirements” found at 10 CSR 10-6.250.<sup>5</sup> Similarly, Condition PW003 describes the company’s obligation to comply with the National Emission Standards for Hazard Air Pollutants (NESHAPs) for asbestos, 40 C.F.R. Part 61, Subpart M and 10 CSR 10-6.080, when undertaking any asbestos renovation and demolition activity.

With regard to Condition PW002, for reasons not raised by the Petitioner, but otherwise identified by EPA Region 7, EPA will ask the permitting authority to remove the “Asbestos Abatement Projects - Certification, Accreditation, and Business Exemption Requirements” found at 10 CSR 10-6.250 from the title V permit. These asbestos-related requirements are not derived

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<sup>5</sup> 10 CSR 10-6.250 requires training for asbestos abatement occupations by state-certified trainers.

from Clean Air Act authority and therefore may not be placed in the title V permit as federally-enforceable Clean Air Act requirements.

With regard to Condition PW003, EPA agrees that title V permit conditions must be written with enough specificity to assure that the permit applicant, the public, and regulatory authorities know what requirements apply. See 40 C.F.R. § 70.6. However, EPA does not agree with petitioner that the use of the word “appropriate” in the monitoring, record keeping, and reporting section of permit condition PW003 leaves it up to the discretion of the applicant to determine what is necessary to demonstrate compliance with the applicable requirements. It is clear from the terms of the permit that when a demolition or renovation project is undertaken, the permittee must follow the procedures and requirements outlined in 40 C.F.R. Part 61, Subpart M for any activities that would trigger this regulation.

However, EPA notes that the asbestos NESHAP does not contain a quantitative emission standard or a monitoring requirement to measure such an emission standard as that term is commonly understood. Asbestos emissions are essentially invisible and unpredictable during a demolition or renovation activity. Actions such as the breaking and pulling of building materials are sporadic and release fibers in a way that is impossible to predict and therefore difficult to monitor. Pursuant to section 112(h) of the CAA, when it is not feasible to prescribe or enforce an emission standard EPA may promulgate a work practice or operational standard in lieu of an emission standard that is consistent with Act’s requirements. EPA has determined that there is no feasible way to monitor asbestos emissions resulting from a demolition or renovation project and, therefore, EPA employs a work practice standard as prescribed by the Act and also uses visible emissions as a surrogate for asbestos. In other words, if asbestos containing materials are

being removed from a facility and visible emissions occur during that activity, the emissions resulting from the demolition or renovation of asbestos containing materials are subject to the asbestos NESHAP. Thus, the specific regulatory requirements necessary to assure compliance with the asbestos NESHAP can be found by consulting the cross referenced federal regulations.

A title V permit may refer to, cross reference, or incorporate by reference, a rule, an existing permit, or other applicable requirements to fill in the details on monitoring, record keeping, or reporting; but only to the extent that the information is publicly available, detailed enough that the manner in which the citation applies to a facility is clear, and is not reasonably subject to misinterpretation. Material incorporated into a permit by reference must be specific enough to define how the applicable requirement applies, and the referenced material should be unambiguous in how it applies to the permitted facility. In other words, some citation in a permit may be appropriate if the level of detail provided is sufficient to assure compliance with all applicable requirements. This streamlining approach is further discussed on pages 37-41 in EPA's "White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program," (March 5, 1996).<sup>6</sup>

## **Conclusion**

In this case, the permit, in the first paragraph under *Section II , Plant Wide Emission Limitations*, makes clear that the applicant, and others interested in the permit, should "consult the appropriate sections in the Code of Federal Regulations (C.F.R.) and Code of State Regulations (CSR) for the full text of the applicable requirements." These documents are widely

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<sup>6</sup> See <http://www.epa.gov/region07/programs/artd/air/title5/t5memos/wtppr-2.pdf>

distributed and publicly available, both in hardcopy format and electronically on the Internet. The cross referenced rules provide detailed instructions for complying with the asbestos NESHAP requirements. Furthermore, while the permit language might be improved by eliminating the word “appropriate,” EPA does not believe that the wording creates sufficient confusion to compromise the enforceability of the permit. Therefore, EPA finds that in this instance the use of the word “appropriate,” and the cross-referencing provisions in the title V permit are sufficient to assure compliance with the applicable requirements.

**Paragraph A.2.**

Petitioner next alleges that the opacity requirements found in Condition PW004 are unclear or inadequate in that the requirements apply to the “entire facility,” yet some of the plantwide emissions such as those from truck unloading stations, storage piles, and the haul road, come from something other than a discernable emission point or stack. Thus, petitioner contends that since it is unclear how these other (“fugitive”) emissions are to be monitored through the opacity requirements the permitting authority should have to rewrite this condition to limit the application of this condition to the emissions units which exhaust through stacks, and provide a description of each rule in the Statement of Basis clarifying the distinction between stack and fugitive emissions.

Permit Condition PW004 lists the procedures that Doe Run must use to assure compliance with the opacity requirements. The state’s opacity rule at the time of permit issuance was 10 CSR 10-3.080; however, since that time, that regulation, which was in the state implementation plan (SIP), was rescinded by the state on May 30, 2000, and has since been removed from the SIP. It has been replaced with 10 CSR 10-6.220 which is now a part of the

approved SIP. When the permit is reissued in response to this Order, these regulatory citation changes will be revised. Given the large number of emission points subject to the opacity rule, the permitting authority summarizes the opacity requirements into one condition, applicable to all equipment at the plant. Under the monitoring provisions of PW004, the permit specifies how Doe Run is to periodically evaluate visible emissions for equipment subject to the rule.

In the introductory paragraph of the monitoring section, the Petitioner selects the following passage: “The permittee shall conduct opacity readings on this emissions unit” (emphasis added) to ask how the opacity rule should be applied to other emissions at the plant including those from truck unloading stations, storage piles, and haul roads. Petitioner believes that the permitting authority should have provided a description of each rule in the Statement of Basis clarifying the distinction between stack and fugitive emissions. Furthermore, Petitioner believes that the permit should be modified to make clear that Condition PW004 applies only to stack emissions. As a consequence, Petitioner alleges that “no piece of equipment is clearly included in, or clearly excluded from, this condition.”

In its Response to Comments document, the permitting authority notes that the opacity rule found at 10 CSR 10-3.080 and 10-6.220 applies only to point sources of emissions. It further clarifies that other non-point, or fugitive emissions are covered by Condition PW001. Condition PW001 outlines the requirements of the fugitive dust rule found at 10 CSR 10-6.170.

Following comments by Petitioner during the public review period, in the final permit MDNR revised the boilerplate language in Condition PW004 to specify the opacity limitations and applicability dates for new and existing equipment subject to the rule. This revision allows the reader to clearly associate the equipment construction dates in *Section I, Installation*

*Description and Equipment Listing*, of the permit and the appropriate opacity limitation with any individual piece of equipment. Consequently, it is now clear that the opacity rule applies to stack emissions and the fugitive dust rule applies to fugitive emissions at the plant.

## **Conclusion**

While EPA understands the potential for the type of confusion expressed by the Petitioner, EPA believes that the permitting authority has resolved any outstanding questions about how the rules apply to point and non-point emission sources, and that it is not necessary for the permitting authority to reopen the permit for this reason. EPA finds that the language change of Permit Condition PW004 along with the Response to Comments document, the title V permit, and associated Statement of Basis provides the reader with enough information to determine which rules apply to stack emissions and which apply to non-stack visible emission, and to determine what opacity limit applies to individual pieces of equipment. Therefore, petitioner's request that EPA object on this issue is denied.

### **Paragraph A.3.**

Petitioner also takes issue with the permitting authority's monitoring evaluation in Condition EU0040-002. In particular, Petitioner questions the permitting authority's contention that no monitoring is necessary on the cement and fly ash silos because the equipment, absent controls, can demonstrate compliance with the Process Weight Rule (PWR) rule.<sup>7</sup> Petitioner

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<sup>7</sup> In general, a "process weight rule" (PWR) establishes the amount of particulate matter that an emissions unit may emit to the atmosphere, based on the total amount of raw materials (excluding liquid or gaseous fuels or combustion air) introduced to the process. The emission limitation may be expressed in terms of a mass limit (pounds per hour) or a concentration limit (grains per standard cubic feet). If mass-based, the limitation is selected either from a PWR table (if the PWR exactly matches one of the values appearing in the table) or calculated using

estimates that if equipment performance degrades or malfunctions by more than 32% then a violation of the PWR rule will occur. Petitioner contends that without adequate monitoring, the company could pollute with impunity. Petitioner further questions the state's legal authority for waiving the monitoring requirement and seeks a revision of the permit to incorporate adequate monitoring or a rationale for not requiring monitoring be included in the Statement of Basis.

Condition EU0040 summarizes the applicable requirements for nine emission points that make up Concrete Batch Plant #2. Plant #2 is an underground, portable operation comprised of fly ash silos, sand storage and conveying equipment, a cement mixer, screening, and other conveyors. Condition EU0040-001 incorporates, verbatim, the emission control, monitoring, record keeping, and reporting requirements specified in Doe Run's construction permit, No. 1197-027. Condition EU0040-002, the specific condition at issue here, restricts the amount of particulate matter that may be emitted from the silos. The Condition summarizes the emission limitation, monitoring, record keeping, and reporting requirements necessary to assure compliance with 10 CSR 10-3.050 and 10 CSR 10-6.400.

EPA disagrees with Petitioner's argument that a violation of the PWR rule is likely to occur. In general, it is not possible for a source operation to emit at a rate greater than its

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the appropriate interpolation formula found in the rule. If concentration-based, the limitation is selected from the appropriate table. In both cases, as the raw material process rate increases, the stringency of the emission limitation increases on a per-unit basis. The relevant process weight rule in this case at the time of permit issuance, 10 CSR 10-3.050, contains no initial or ongoing periodic monitoring for either the mass- or concentration-based particulate matter emission limitations. 10 CSR 10-3.050, which at the time of permit issuance was in the approved SIP, was rescinded by the State on March 30, 2001, and has since been removed from the SIP. This regulation was replaced with 10 CSR 10-6.400, which is a part of the approved SIP. The necessary changes to the permit will be made when it is reissued.



uncontrolled emission rate unless inherent process or raw material recovery equipment also fails. An example of where this may occur is in the specialty chemical industry where the failure of an inherent raw material or product recovery device like a condenser or distillation column could put an additional pollutant burden on the control equipment and may result in higher than expected uncontrolled emissions. In this case, emissions from the underground cement and fly ash silo are controlled, in part, with a baghouse and in part through inherent retention of particulate matter in the mine. In the Statement of Basis, the state estimates that 99 percent of the emissions are controlled by the baghouse and that an additional 50 percent of the remaining 1 percent of the emissions will “fall out” and be retained in the mine. To err on the conservative side, the state only allowed the 50 percent mine retention rate, rather than the customary 90 percent, for the residual particulate matter emitted from the fly ash silo baghouse, because of the dry, lightweight properties of the fly ash and cement raw materials. Unlike traditional raw material or process recovery equipment, which has mechanical parts and may be prone to failure, it is highly unlikely that the inherent control provided by the mine will fail, except under some catastrophic circumstance (*e.g.*, earthquake, explosion) where there would be a major breach to the atmosphere. Assuming that the uncontrolled emission factor used by the permitting authority is representative, emissions are not expected to be higher than the uncontrolled emission rate, and therefore it is highly unlikely that the equipment, even uncontrolled, will exceed the process weight rate emission limitation. As such, EPA agrees that monitoring of the cement and fly ash silos is not necessary to assure compliance with the PWR rule.

Detailed calculations of particulate matter emissions from the cement/fly ash silos (emission unit EU004) are included in the Statement of Basis under the heading “Calculations.”

These calculations demonstrate that the uncontrolled emissions would not exceed the required limit, even without operating the baghouse. However, the permit requires that the baghouse be operated at all times when the unit is in operation (*i.e.*, when the silo is being filled with cement). The permitting authority supplemented the Statement of Basis explanation with additional information, explaining on page 2 that “Monitoring is not required in a permit condition when an emission source is in compliance with a rule limitation without a control device.”

### **Conclusion**

The detailed calculations included in the Statement of Basis, which indicate that the uncontrolled emissions of particulates will not exceed the required limit, provide the rationale for the decision not to require emission monitoring. Taken together with the supplemental information provided in the Response to Comments, the legal and factual basis for the permit condition is adequately justified. In this case, the permitting authority made a reasonable judgment that additional monitoring, for the sole purpose of evaluating compliance with the PWR rule, provides no added value for the cement and fly ash silos. Accordingly, EPA denies Petitioner’s request to object on this issue.

However, for reasons not raised by the Petitioner, but otherwise identified by EPA Region 7, EPA is requesting that MDNR reevaluate whether the PWR and opacity rules have been properly applied to the underground equipment, including the cement and ash silos, and the mine ventilation shafts through which these emissions enter the atmosphere. If the results of this reevaluation warrant, EPA will call for a “reopen for cause” pursuant to 40 C.F.R. § 70.7(g), at which time interested parties will have an opportunity to comment and request a hearing on

any specific PWR and opacity-related “reopen for cause” changes, as appropriate, pursuant to 40 C.F.R. §70.7(h).

**Paragraph A.4.**

Petitioner’s fourth claim alleges that permit condition EU0060-001 contains no emissions monitoring requirement<sup>8</sup> for the underground portable screen and conveyor, and that this lack of monitoring is not sufficiently explained in the Statement of Basis. Petitioner believes that the permit should “clearly state what is being required so that all parties can understand what compliance entails, and to yield reliable data about the emissions from the facility.”

Permit Condition EU0060 summarizes the applicable requirements for the PORT367 Underground Portable Screen and Conveyor. In short, this condition adopts the PM<sub>10</sub> emission limitation, record keeping, and reporting requirements of the previously-issued preconstruction permit. See Permit No. 0998-028. The preconstruction permit establishes a 12-month rolling restriction on PM<sub>10</sub> using a mass balance approach to verify compliance. Doe run is required by the preconstruction permit to record monthly equipment throughput and calculate total mass emissions using the approved emission factors found in Form B which is attached as an appendix to the permit.

The maintenance of records, whether emission calculations, fuel content information, or some other relevant information, may be sufficient monitoring to assure compliance for certain

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<sup>8</sup> The state’s title V permit template segregates the emission limitation, monitoring, recordkeeping, and reporting requirements into separate table blocks in an effort to clearly distinguish between the applicable requirements. This attempt at clarity may indeed be the cause for confusion, especially where, as in this case, one or more of the table blocks is left empty or is not fully explained in the Statement of Basis.

emission units, and applicable requirements. For example, record keeping of required work practices, pollutant content of fuel or raw material, and inspections of design or equipment specifications may satisfy the monitoring requirements of the Clean Air Act and part 70 depending on the applicable requirements and the type of emission units.

In translating the preconstruction permit requirements into the title V permit, the permitting authority retained the compliance methodology required by the preconstruction permit. Form B from the preconstruction permit is incorporated into the title V permit as Attachment D, with a minor correction noted in the Statement of Basis. Under the record keeping provisions in Condition EU0060-001, Doe Run must use Attachment D, or an equivalent form, to demonstrate compliance with the PM<sub>10</sub> mass balance limit. This record keeping satisfies the requirement that permits contain monitoring sufficient to assure compliance as required by 40 C.F.R. § 70.6(c)(1). Accordingly, the record keeping provisions in Condition EU0060-001 are sufficient as the monitoring method for the underlying applicable requirement.

### **Conclusion**

While the permitting authority could have provided a more detailed explanation in the Statement of Basis, or used a more accurate word than “none” to describe the monitoring required by this Permit Condition, as discussed above, EPA finds that there are in fact compliance verification techniques required by the permit, and that these are sufficient to verify compliance with the underlying applicable requirements. Therefore, Petitioners request that EPA object on this ground is denied.

### **Paragraph A.5.**

Lastly, Petitioner takes exception with the generic use of “manufacturer’s specifications” as a periodic monitoring method for the underground cement and fly ash silos. Petitioner contends that Permit Condition EU0040-01 is not practically enforceable because it does not include explicit instructions on what the permittee must do or incorporate by reference the manufacturer’s specifications, and since manufacturer’s specifications are frequently difficult to obtain, they should be incorporated into the title V permit.

In its Response to Comments document, addressing the same comment raised by Petitioner during the public review period for the draft title V permit, the permitting authority stated that the manufacturer’s specifications provision is only “one of four monitoring requirements and is commonly applied language in permits referring to baghouses, paint booths, and solvent cleaners.” Despite this explanation, Petitioner believes that the manufacturer’s specifications clause represents a major loophole because “the facility could claim at any time that certain aspects of the specifications are not applicable or are not necessary for one reason or another.”

As previously described, Permit Condition EU0040 summarizes the applicable requirements for Concrete Batch Plant #2. Under the monitoring provisions in EU0040-001, the permitting authority requires Doe Run to operate and maintain the cement and fly ash silo baghouse “in accordance with manufacturer’s specifications.” In addition, the permittee must maintain an on-site inventory of replacement bags and an operating and maintenance log noting, in part, all malfunctions and maintenance activities performed on the baghouse. These monitoring requirements are adopted into the title V permit, verbatim, from the preconstruction permit.

EPA agrees with Petitioner that manufacturer's specifications, alone, are not sufficient periodic monitoring to assure that a baghouse is properly maintained and operated. Most manufacturer's specifications are intended to be general guidelines and are frequently updated to improve operator and equipment performance as time goes on. While certain key elements from the specifications document could serve as the basis for useful periodic monitoring, EPA does not recommend that the specification manual itself be incorporated by reference into a title V permit. Frequent revisions to the specification documents could trigger many unnecessary permit reopenings to adopt the latest changes. In general, such an approach would not be practical given the large number of title V permits that would continuously be undergoing permit revisions.

Continuing, optimum, baghouse performance is integral to protection of the 15 ton-per-year PM<sub>10</sub> limitation. As a consequence, the permit must contain more explicit monitoring requirements to assure ongoing operation and maintenance of the baghouse. Monitoring techniques, such as pressure drop detection, broken bag detection, or fan amperage measurements, along with a visible emissions assessment program may help to assure that the equipment is maintained and repaired at the first sign of trouble.

## **Conclusion**

As discussed in Section I, since the underlying applicable requirement of Permit Condition EU0040-01 requires periodic monitoring, section 70.6(a)(3) does not apply even if that monitoring is not sufficient to assure compliance. At issue is whether the underlying periodic monitoring requirements incorporated from the pre-construction permit constitute monitoring sufficient to assure compliance with the emission limitations associated with the fly

ash silo and controls as required by section 70.6(c)(1). The state's pre-construction permit limits the total emissions of PM<sub>10</sub> from this and several other pieces of equipment to less than 15 tons per year. The assumptions used to make the PM<sub>10</sub> mass balance compliance calculation rely heavily on the 99 percent control efficiency of the silo baghouse and the 50 percent particulate fall-out rate estimated for the mine. Absent controls on the silo, it would be highly unlikely that Doe Run would be able to demonstrate compliance with the 15 ton per year PM<sub>10</sub> restriction. In fact, based on the uncontrolled emission calculations shown in the Statement of Basis, uncontrolled PM<sub>10</sub> emissions could be as high as 118 tons per year from the fly ash silo, well in excess of the permitted limit.

The permit also requires that the facility maintain a ready-supply of replacement bags and an operating and maintenance log noting, in part, all malfunctions and maintenance activities performed on the baghouse. While these are prudent activities, the permit does not compel Doe Run to replace the bags at regular intervals or when a bag breaks. Further, manufacturer's specifications, while important, are not enforceable commitments unless certain key elements are placed in the title V permit. Therefore, EPA agrees with petitioner that it is necessary for the title V permit to establish additional monitoring to assure that the baghouse continues to operate under the efficiency assumptions used in the original permit.

In addition to the baghouse-related requirements already contained in the title V permit, EPA recommends that the MDNR require installation (or use of any existing monitoring equipment), operation, and maintenance of baghouse monitoring equipment, such as broken bag detectors, pressure drop indicators, or fan amperage meters, to document continuing baghouse performance. Therefore, EPA grants the Petitioner's request on this claim and finds that the

permitting authority must revise the title V permit to incorporate additional monitoring and other necessary procedures to assure that baghouse repairs will be undertaken in a timely fashion to assure compliance with the PM<sub>10</sub> emission limitation.

**B. Claim 2: The Permit Lacks An Appropriate Statement of Basis**

Petitioner alleges that “the failure to provide the legal and factual basis for decisions about the requirements for, or lack of, periodic monitoring in the permit is a major deficiency in the statement of basis.” Petitioner believes that the content of the Statement of Basis is substantially incomplete, contains inaccuracies, and explains virtually no permit conditions. In the absence of an adequate Statement of Basis, Petitioner concludes that: ( 1) the Doe Run title V permit violates the Part 70 requirements; (2) the Administrator must object to the issuance of the permit; and (3) the permitting authority must draft a new permit that includes a complete Statement of Basis.

In particular, Petitioner notes three instances where it believes the Statement of Basis is flawed. As previously described, Petitioner believes the Statement of Basis should more completely describe 1) the intent of the fugitive dust and opacity rules [See Paragraph A.2.], 2) the justification for “no monitoring required” when uncontrolled emissions remain well below the process weight rate limit [ See Paragraph A.3.], and 3) the rationale for “no monitoring required” for underground equipment governed by the PM<sub>10</sub> mass balance limit incorporated from previously issued preconstruction permits [See Paragraph A.4.].

EPA agrees that the rationale for the selected monitoring method must be clear and documented in the permit record. This is incorporated in the requirement at 40 C.F.R.



§ 70.7(a)(5) that the permitting authority “shall provide a statement that sets forth the legal and factual basis for the draft permit conditions.” This requirement is also incorporated into the State of Missouri regulations at 10 CSR 10-6.065(6)(E)1.C. The Statement of Basis should be as complete as possible, not only for the public, and inspectors’ benefit, but to assure that future generations of permit writers are able to understand what occurred in past permitting actions. In this case, while EPA believes that the Statement of Basis could have more clearly explained and documented Doe Run’s rationale for certain monitoring decisions, EPA is satisfied that the permit record, as a whole, meets the requirements in 70.7(a)(5).

Additionally, EPA is mindful that each reviewer will have a different knowledge level of title V and what information should be included in the permit record. While the permitting authority should strive to strike an even balance, there is no obligation on the part of the permitting authority to write the Statement of Basis to satisfy all experience levels from beginner to expert. If a reviewer has questions, it is appropriate to raise them during the public comment period. As a follow-up, the permitting authority must then explain any additional details in its Response to Comments document. The title V permit, the Statement of Basis, and Response to Comments documents, as a whole, constitute the decisionmaking record.

## **Conclusion**

EPA acknowledges that certain issues explained in the Statement of Basis can be confusing, however, as discussed more fully above in Sections A.2, A.3 and A.4, we conclude that the State of Missouri has met its obligation to set forth the legal and factual basis for the draft permit conditions, including appropriate references to the applicable statutory and regulatory provisions. This obligation has been met in the Statement of Basis attached to the

original draft permit and the supplemental information provided by the permitting authority's Response to Comments Document. Accordingly, EPA finds that the permit record, as a whole, satisfies the requirements in 70.7(a)(5). Therefore, Petitioner's request that EPA object to the permit on this basis is denied.

**V. ADMINISTRATOR'S DECISION**

For the reasons set forth above and pursuant to section 505(b)(2) of the Clean Air Act, EPA grants, in part, and denies, in part, the petition of Sierra Club - Ozark Chapter requesting that the Administrator object to issuance of the Doe Run Buick Mine and Mill permit. As previously noted, Petitioner, and other interested parties, may also wish to re-evaluate the Doe Run permit in light of the "reopening for cause" issues raised by EPA Region 7.

Pursuant to Sections 505(b) and 505(e) of the Clean Air Act (42 U.S.C. §§ 7661d(b) and (e)) and 40 C.F.R. §§ 70.7(g) and 70.8(d), the MDNR shall have 90 days from receipt of this Order to resolve the objection identified under the heading Paragraph A.5 in Section IV. A. above, and to terminate, modify, or revoke and reissue the Doe Run permit in accordance with this objection.

July 31, 2002  
Dated:

/s/  
Christine Todd Whitman, Administrator