

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2371-A AFIN: 38-00393

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

American Silica, LLC - Black Rock Processing Site
85 Lawrence County Road 205
Black Rock, Arkansas 72415

3. PERMIT WRITER:

Jesse Smith

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Industrial Sand Mining
NAICS Code: 212322

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
5/2/2016	New	New facility. Mainly PM emissions due to processes involving silica sand.

6. REVIEWER’S NOTES:

American Silica is located off of County Road 210 in Black Rock, Arkansas, the site known as Black Rock Processing Plant. The primary product of the facility is silica sand (NAICS 212322).

The facility has submitted an application for a new minor source air permit for this site. The initial application contained SN-01 through SN-10 as well as SN-NPS to account for haul road emissions. The facility is subject to NSPS Subpart OOO - *Standards of Performance for Nonmetallic Mineral Processing Plants* and NSPS Subpart UUU – *Standards of Performance for*

Calciners and Dryers in Mineral Industries. The permitted emission rates are as follows: 60.4 tpy PM, 58.8 tpy PM₁₀, 0.1 tpy SO₂, 1.0 tpy VOC, 15.5 tpy CO, and 22.7 tpy NO_x.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility is a new facility. There are no current compliance issues.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01-08, 10	PM	NSPS Subpart OOO
09	PM	NSPS Subpart UUU

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

Based on Department procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards

Y

If exempt, explain: No H₂S present at the facility.

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)		
	80 parts per billion (8-hour average) residential area		
	100 parts per billion (8-hour average) nonresidential area		

*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01-10	AP-42 Table 11.19.1-1	0.0013 lb/ton PM	Wet Suppression	98%	Control Equipment included in AP-42 emission rate.
09	AP-42 Table 1.4-1	120 lb/MMscf NO _x 84 lb/MMscf CO	-	-	0.052 MMscf/hr
	AP-42 Table 1.4-2	7.6 lb/MMscf PM/PM10 0.6 lb/MMscf SO ₂ 5.5 lb/MMscf VOC			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
NPS	AP-42 Table 13.2.2-2	0.25 lb/VMT 8 lb/day	-	-	80 trucks a day, 0.4 miles travelled each.

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01-08, 10	PM	Perform inspections on wet suppression system.	Monthly	40 C.F.R. § 60.674(b)
01-08, 10	PM	Method 5 of Appendix A-3 or Method 6 of Appendix A-6	Within 60 days after achieving maximum production	40 C.F.R. § 60.672(a)
09	PM	Method 5 in Appendix A of part 60. Sampling time of at least 2 hours, sample volume of at least 1.70 dscm	Initial, within 180 days of startup	40 C.F.R. § 60.736 (b)(1)

14. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01-10	Silica Sand Throughput	3,650,000 tons per year	Monthly	N
01-08, 10	Each periodic inspection required under §60.674(b) or (c) in a logbook	-	As needed	N
09	Each three 6-minute averages of the opacity of visible emissions	10%	Each day	N
09	Any exceedances of control device operating parameters	-	Semiannually	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01-08, 10	7%	Table 3 to 40 C.F.R. Subpart OOO	Method 9 of Appendix A-4 and the procedures in §60.11 and §60.675(b)
09	10%	40 C.F.R. § 60.732 (b)	Method 9 of Appendix A and the procedures in §60.11 and §60.736(b)(2)

17. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

Permit #: 2371-A

AFIN: 38-00393

Page 6 of 6

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
N/A								

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
N/A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

American Silica, LLC - Black Rock
 Processing Site
 Permit #: 2371-A
 AFIN: 38-00393

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	0	60.4
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	<u>1445.372</u>	
		Annual Chargeable Emissions (tpy)	<u>60.4</u>	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0	60.4	60.4
PM ₁₀	0	58.8	58.8
PM _{2.5}	0	0	0
SO ₂	0	0.1	0.1
VOC	0	1	1
CO	0	15.5	15.5
NO _x	0	22.7	22.7