

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-06500001-2019**
Applications Received: **July 30, 2018; September 17, 2018; December 18, 2018; and
January 28, 2019**
Plant Identification Number: **065-00001**
Permittee: **U. S. Silica Company**
Facility Name: **Berkeley Springs Plant**
Mailing Address: **P.O. Box 187; Berkeley Springs, WV 25411**

Physical Location: Berkeley Springs, Morgan County, West Virginia
UTM Coordinates: 739.59 km Easting • 4,393.48 km Northing • Zone 17
Directions: Off of Route 522 approximately 3 miles north of Berkeley Springs

Facility Description

Sandstone mining, quarrying, and processing facility. SIC Code - 1446.

On July 30, 2018 the WV DEP DAQ received a minor modification application for this facility: R30-06500001-2014 (MM03). This application was for the replacement of a Palletizing Automatic Bagger (Emission Unit ID: PACKR1) with a new Palletizing Automatic Bagger. The replacement Bagging and Palletizing Line system (PACKR1) is an affected source under 40 CFR Part 60, Subpart OOO. PACKR1 was permitted in R13-0029A.

On December 18, 2018 the WV DEP DAQ received a minor modification application for this facility: R30-06500001-2014 (MM04). This application was for the installation of a damp feed hopper and a damp 18" conveyor belt (CONV 55) at the Berkeley Springs Plant to facilitate the processing of sand with iron levels above customer specification. CONV 55 is also an affected source under 40 CFR Part 60, Subpart OOO. CONV 55 was permitted in R13-2145G.

On January 28, 2019 the WV DEP DAQ received a minor modification application for this facility: R30-06500001-2014 (MM05). This application was to incorporate changes made in both R13-2595A and R13-

2595B. These permits addressed the addition of an air classifier and cristobalite processing operation (Stacks # 15, 45, 46, and 47), which are affected sources under 40 CFR Part 60, Subpart OOO.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2017 Actual Emissions
Carbon Monoxide (CO)	13.75	1.67
Nitrogen Oxides (NO _x)	96.35	9.93
Particulate Matter (PM _{2.5}) ¹	194	23.66
Particulate Matter (PM ₁₀) ¹	853.56	35.30
Total Particulate Matter (TSP)	2118.58	111.12
Sulfur Dioxide (SO ₂)	267	0.03
Volatile Organic Compounds (VOC)	1.27	0.16

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2017 Actual Emissions
Total HAPs	<0.10	<0.10

Some of the above HAPs may be counted as PM or VOCs.

¹*PM_{2.5} and PM₁₀ are components of TSP.*

Note: Replacement of PACKR1 resulted in a decrease of 185.45 TPY of PM₁₀ and TSP.

Title V Program Applicability Basis

This facility has the potential to emit 853.56 TPY of PM₁₀ and 267 TPY of SO₂. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, U.S. Silica Company is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Control of PM from Manufacturing Sources
	45CSR10	Sulfur Dioxide Emissions
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Construction/modification permits
	45CSR16	NSPS Requirement
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	40 C.F.R. 60 Subpart OOO	NSPS for Non-metallic mineral processing
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R 64	Compliance Assurance Monitoring (CAM)
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (if any)
R13-2595B	April 20, 2016	PD10-027
R13-0715F	December 11, 2003	
R13-0750	June 14, 1984	
R13-1970	August 13, 1997	
R13-0991	April 12, 1988	
R13-1917	December 22, 1995	
R13-2015C	November 20, 2009	
R13-2145G	January 7, 2019	
R13-2423B	July 24, 2017	
R13-2299A	August 29, 2003	
R13-0029A	November 19, 2018	
		PD11-037
		PD12-007
		PD05-008

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

Emission Units Table Changes

The following changes were made to the emission units table at the time of this permit renewal:

- The description for the 36" conveyor (Emission Unit ID: CONV6) was revised.
- The 30" Shuttle Conveyor in Fluid Bed Drain Shed (Emission Unit ID: CONV17) was removed.
- The Palletizing Automatic Bagger (Emission Unit ID: PACKR1) was replaced with a new Palletizing Automatic Bagger with the same emission unit and emission point IDs, and the emission units table was updated accordingly.
- The emergency propane generator was removed.
- All equipment associated with the addition of an air classifier and cristobalite processing operation (Stacks # 15, 45, 46, and 47) were added.
- Damp Conveyor (CONV55) was added.

Palletizing Automatic Bagger (Emission Unit ID: PACKR1)

The new bagger system is an NSPS source subject to 40CFR60, Subpart OOO and is addressed in Section 5.0: Source-Specific Requirements [NSPS Sources]. The old bagger system was not subject to 40CFR60, Subpart OOO and was addressed in Section 6.0: Source-Specific Requirements [Non- NSPS Sources]. All references to the old bagging system were removed from Section 6.0.

The new bagger system was permitted under R13-0029A. R13-0029 was originally approved on July 30, 1973 as a one-page permit with no requirements or limitations and was not included in previous Title V permits. R13-0029A contains limitations and standards, monitoring, testing, recordkeeping, and reporting requirements for the new bagger system. Therefore, all source-specific requirements in R13-0029A were incorporated into this permit renewal.

Several requirements in R13-0029A were already included in the previous Title V permit. These Title V conditions required minor, if any, revisions except for the addition of citations for the applicable NSR conditions. These conditions are as follows:

Existing Title V Permit Condition	Summary of Permit Condition	Regulatory Citation in Existing Title V Permit	R13-0029A Condition
3.1.9.	20% opacity limit except as noted in 45CSR§7-3.2	45CSR§7-3.1	4.1.2.
3.1.10.	No visible emissions from full enclosures	45CSR§7-3.7	4.1.2.c.
3.1.11.	No venting into the open air in excess of calculated PM limit	45CSR§7-4.1	4.1.2.d.
3.1.13.	Fugitive emissions minimization and controls	45CSR§7-5.1	4.1.2.e.
3.1.14.	Appropriate dust control	45CSR§7-5.2	4.1.2.f.
3.2.1.	Weekly visible emissions observations	45CSR§30-5.1.c.	4.2.1.
3.3.3.	Stack testing	45CSR§7-8.1	4.1.2.g.
3.3.4.	Additional testing	45CSR§7-8.2	4.1.2.h.
3.4.1.	Records of monitoring	45CSR§30-5.1.c.2.A.	4.4.1.
5.2.3.	Monthly and annual records on the processing rate of sand	45CSR13, R13-2595, B.6.	4.2.4.
5.2.4.	Maintenance records of air pollution control devices	45CSR13, R13-2595, B.8.	4.2.6.
5.2.5.	Quarterly visible emissions inspections using Method 22	40 C.F.R. § 60.674(c) and 45CSR16	4.2.2.
5.3.2.	Initial compliance demonstration with visible emissions standards	40 C.F.R. §§60.675(c), (d), (e), and (g); 45CSR16	4.3.1.
5.3.3.	Initial compliance demonstration with PM emission limits	45CSR16; 40CFR§§60.675(b), (e)(3), and (e)(4)	4.3.2.
5.3.5.	Repeat performance testing every 5 years	40 C.F.R. §60.672(b) and Table 3 of 40 C.F.R. 60 Subpart OOO; 45CSR16	4.3.4.
5.4.6.	Record of Maintenance of Air Pollution Control Equipment	45CSR13, R13-2145, 4.4.2.	4.4.2.
5.4.15.	Record of Malfunctions of Air Pollution Control Equipment	40 C.F.R. § 60.676(b)(1) and 45CSR16	4.4.3.
5.5.3.	Notification of initial start-up	40 C.F.R. §§60.676(i)(1) and (k); 45CSR16	4.5.1.
5.5.4.	Reporting results of testing	40 C.F.R. §§60.676(f) and (k); 45CSR16	4.5.2.

The remaining requirements from R13-0029A were incorporated into this Title V permit as new permit conditions:

New Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-0029A Condition
5.1.12.1.a.	Limits for sand processed through the replacement Bagging and Palletizing Line system	N/A	4.1.1.
5.1.12.1.b.	7% opacity limit and performance test required.	45CSR16; 40 CFR §60.672(a) & Table 2 of Subpart OOO	
5.1.12.1.c.	PM limits for the cartridge filter dust collector and performance test required	45CSR16; 40 CFR §60.672(a) & Table 2 of Subpart OOO	
5.1.12.1.d.	Fugitive emissions limit and performance test required	45CSR16; 40 CFR §60.672(b) & Table 3 of Subpart OOO	
5.1.12.1.e.	PM emission limits from the cartridge filter dust collector	N/A	
5.1.12.2.	Exceedances of 45CSR7 limits due to malfunctions	45CSR§7-9.1.	4.1.2.i.
5.1.12.3.	Compliance with 40CFR60, Subpart OOO: performance tests, PM standards, and reporting/recordkeeping	N/A	4.1.3.
5.1.12.4.	Additional testing and suspension/revocation of permit	45CSR§§13-6.1, 10.2, and 10.3.	4.1.4.
5.1.12.5.	Operation and Maintenance of Air Pollution Control Equipment	45CSR§13-5.10.	4.1.5.
5.2.6.	Maintain records on site for 5 years	N/A	4.2.5.
5.2.7.	Monitor and maintain records of daily observations of delta P across cartridge filter dust collector, CF #40	N/A	4.2.7.
5.3.4.c.	Initial performance testing schedule	45CSR16; 40CFR§§60.672(a) and (b)	4.3.3.
5.3.6.	Submission of test protocol	N/A	4.2.3.

Damp Conveyor (Emission Unit ID: CONV 55)

The damp conveyor is an NSPS source subject to 40CFR60, Subpart OOO. This new conveyor was addressed in new section 6.0 of R13-2145G. The language in these conditions was already included in Section 7.0 of the previous Title V permit. Therefore, this section was revised to include references to CONV 55 and Section 6.0 of R13-2145G in conditions 7.1.1, 7.2.1, 7.3.1, 7.3.2, 7.3.3, 7.4.1, 7.4.2, 7.4.3, 7.5.1, and 7.5.2 of the Title V permit.

R13-2595B

This permit was issued on April 20, 2016 and was incorporated into the permit with this renewal. This permit was for the installation of an air classifier and cristobalite processing operations, which is an NSPS source subject to 40CFR60, Subpart OOO. With this permit, the following equipment was installed:

Emission Unit ID	Emission Point ID	Emission Description	Unit	Design Capacity (TPH)	Year Installed	Control Device
ELEV25	Stack#15	Bucket Elevator		25	2015	CF#15
FEEDB25		Feed Conveyor Belt		25	2015	
FEEDB26		Feed Conveyor Belt		10	2015	
SCREN25		Scalping Screen		10	2015	
BIN25		Feed Bin		10	2015	
PNEU25		Pneumatic Conveyor		10	2015	
HOPPR25	Stack#46	Feed Hopper		10	2015	CF#46
TANK25	Stack#47	Feed Bin		25	2015	CF#47
AIRSE25	Stack#45	Air Classifier		10	2015	CF#45

R13-2595 was written using the old NSR boilerplate. This current version was written in the new NSR boilerplate. The boilerplates use a different numbering system for the permit conditions requiring revisions to several citations in this Title V permit.

Several of the conditions in R13-2595B for the air classifier and cristobalite processing operations were similar to conditions already included in this permit under a different R13 permit condition, and only revisions to the permit citations were necessary. These conditions are as follows:

Existing Title V Permit Condition	Summary of Permit Condition	Regulatory Citation in Existing Title V Permit	R13-2595B Condition
3.4.1.	Records of monitoring information	45CSR§30-5.1.c.2.A.	4.4.1.
5.2.5.	Quarterly visible emissions inspections	40 C.F.R. §60.674(c); 45CSR16	4.2.2.
5.3.2.	Visible emissions initial compliance	40 C.F.R. §§60.675(c) and (d); 45CSR16	4.3.1.
5.3.3.	PM emission limit initial compliance	45CSR16; 40CFR§§60.675(b), (e)(3), and (e)(4)	4.3.2.
5.3.5.	Repeat testing in 5.3.2. within 5 years	40 C.F.R. §60.672(b) and Table 3 of 40 C.F.R. 60 Subpart OOO	4.3.4.
5.4.6.	Record of maintenance of air pollution control equipment	N/A	4.4.2.
5.4.15.	Record of malfunctions of air pollution control equipment	N/A	4.4.3.
5.5.3.	Notification of initial start-up	40 C.F.R. §§60.676(i)(1) and (k); 45CSR16	4.5.1.
5.5.4.	Reporting of test results	40 C.F.R. §§60.676(f) and (k); 45CSR16	4.5.2.

The new permit conditions added with this renewal are as follows:

New Title V Permit Condition	Summary of Permit Condition	Regulatory Citation	R13-2595B Condition
5.1.10.6.	PM emissions from Stack #41 and #42	45CSR16; 40CFR§60.672(a) & Table 2 of Subpart OOO	4.1.2.f.
5.1.10.7.	Operation and Maintenance of Air Pollution Control Equipment	45CSR§13-5.10.	4.1.3.
5.1.13.1.a.	PM control for material being moved from feed bin to air classifier: fabric filter (99.9% efficiency)	45CSR§7-5.1	4.1.1.
5.1.13.1.b.	7% opacity limit for Stacks #15, #45, #46 & #47	45CSR16; 40CFR§60.672(a) & Table 2 of Subpart OOO	
5.1.13.1.c.	PM control for material being moved from feed bin to Mill #6: fabric filter (99.9% efficiency)	45CSR§7-5.1	
5.1.13.1.d.	Fugitive dust control	N/A	
5.1.13.1.e.	Visible emissions from Stack #47	45CSR16; 40CFR§60.672(a) & Table 2 of Subpart OOO	
5.1.13.1.f.	PM emissions from Stacks #15 & #45	45CSR16; 40CFR§60.672(a) & Table 2 of Subpart OOO	
5.1.13.1.g.	7% opacity for fugitive emissions from feed conveyor belts	45CSR16; 40CFR§60.672(b) & Table 3 of Subpart OOO	
5.1.13.2.	Operation and Maintenance of Air Pollution Control Equipment	45CSR§13-5.10.	4.1.3.
5.2.6.	Recordkeeping to determine compliance with emission limits in 5.1.10.2 and 5.1.12.1.e.	N/A	4.2.5.
5.2.8.	Daily observation of visible emissions for Stacks #15, #45, #46, and #47	N/A	4.2.1.
5.3.4.b	Initial performance testing	45CSR16; 40CFR§§60.672(a) and (b)	4.3.3.
5.3.6.	Test protocol submission	N/A	4.2.3.

Additional Changes to the Title V Permit

- Section 8.0 for the emergency propane generator was removed.
- The Fluid Bed Dryer testing date in Condition 4.3.3 was updated.

Compliance Assurance Monitoring (CAM)

All the new equipment added to the permit with this renewal, are subject to 40CFR60, Subpart OOO which exempts it from CAM according to the exemption in 40CFR§64.2(b)(1)(i).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

N/A

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: Wednesday, March 20, 2019
Ending Date: Friday, April 19, 2019

Point of Contact

All written comments should be addressed to the following individual and office:

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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

After submission to the EPA for review, the address to send reports to EPA Region III was updated in condition 3.5.3. of the proposed permit.