

217/785-1705

CONSTRUCTION PERMIT - REVISED

PERMITTEE

Wedron Silica Company
Attn: Mr. Dave Bach
3450 East 2056th Road
Wedron, Illinois 60557

Application No.: 11120017

I.D. No.: 099804AAB

Applicant's Designation:

Date Received: June 25, 2014

Subject: Wedron 3.5

Date Issued: September 26, 2014

Location: 3450 East 2056th Road, Wedron, LaSalle County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of an expansion project, "Wedron 3.5", as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Introduction

This permit authorizes an expansion project at the industrial sand processing plant (the affected plant) including:

- a. The installation of a new sand processing line with associated truck and rail loadout equipment. The processing line will consist of a natural gas-fired rotary sand dryer (the affected dryer) and screens, belt conveyors, bucket elevators, and storage units and loadout stations (the affected units), as detailed in Tables 2 through 7.
- b. An increase in the production of the existing operations at the affected plant, without any increases in permitted emissions of these operations.

2. Applicable Federal Emission Standards

- a. The affected dryer (RD3-030) is subject to the federal New Source Performance Standards (NSPS) for Calciners and Dryers in Mineral Industries, 40 CFR 60 Subpart UUU and related requirements in the General Provisions of the NSPS, 40 CFR 60 Subpart A.
- b.
 - i. Pursuant to the NSPS, 40 CFR 60.732, emissions from the affected dryer shall not contain particulate matter (PM) in excess of 0.057 gram per dry standard cubic meter (g/dscm) [0.025 grain per dry standard cubic foot (gr/dscf)].
 - ii. Pursuant to the NSPS, 40 CFR 60.732, emissions from the affected dryer shall not exhibit greater than 10 percent opacity.

- c. At all times, the Permittee shall maintain and operate the affected dryer and associated baghouse in a manner consistent with good air pollution control practice for minimizing emissions pursuant to 40 CFR 60.11(d).
- d. For the affected dryer, the Permittee shall comply with the applicable compliance procedures of the NSPS.

3. Applicable State Emission Standards

- a. The emissions of particulate matter from the affected units are subject to the following standards:
 - i. 35 IAC 212.123(a), which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122.
 - ii. 35 IAC 212.301, which provides that no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), as provided by 212.314.
 - iii. 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar new process emission units at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

4. Non-applicability Provisions

- a. This permit is issued based on the affected plant not being subject to the NSPS, 40 CFR 60 Subpart 000, because the affected plant does not crush or grind sand, so that it does not constitute a nonmetallic mineral processing plant, as defined by 40 CFR 60.671.
- b. i. This permit is issued based on this project not being subject to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, because the source is not a major source and the source will continue to not be a major source for purposes of PSD for PSD pollutants other than greenhouse gases (GHG). In particular, the source's

emissions of PM, PM₁₀, NO_x, CO and other PSD pollutants other than GHG are each less than 250 tons/year.

- ii. For GHG emissions, this permit is issued based on this project not being subject to PSD pursuant to 40 CFR 52.21(b)(49)(v)(b), because the increase in emissions of GHG is less than 75,000 tons/year, as carbon dioxide equivalents (CO₂e).
 - c. This permit is issued based on continuous opacity monitoring not being required for the affected dryer pursuant to the NSPS, 40 CFR 60.734(a), as this dryer is an industrial rotary sand dryer exempted from such monitoring by 40 CFR 60.734(c).
5. Good Air Pollution Control Practices
- a. At all times the Permittee shall maintain and operate the affected plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
 - b. Operation of the affected units shall not begin until the associated air pollution control equipment has been constructed and is operational.
6. Operational and Emission Limits
- a.
 - i. The amount of sand processed by the new sand processing line shall not exceed 263,000 tons/month and 2,628,000 tons/year.
 - ii. Compliance with this annual limit and other annual limits in this permit shall be determined from a running total of 12 months of data, i.e., from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
 - b.
 - i. The emissions of particulate matter (PM) emissions from the affected units, excluding fugitive emissions associated with roadways, shall not exceed 0.70 tons per month and 7.0 tons per year.
 - ii. The PM emissions from individual affected units or groups of units at the plant shall not exceed the limits in Table 1.
 - c.
 - i. Natural gas shall be the only fuel fired in the affected dryer.
 - ii. Natural gas usage by the affected dryer shall not exceed 88 mmscf/month, and 876 mmscf/year.

- iii. A. Emissions of the affected dryer from fuel combustion shall not exceed the following limits. These emission limits are based on the maximum fuel usage of the dryer and standard emission factors from USEPA's *Compilation of Air Pollutant Emission Factors*, AP-42.

Pollutant	Emission Factor (lbs/mmscf)	Limit	
		Tons/Mo	Tons/Yr
Nitrogen Oxides (NO _x)	100	3.65	43.80
Carbon Monoxide (CO)	84	3.07	36.79
Volatile Organic Materials (VOM)	5.5	0.20	2.41
Greenhouse Gases (GHG as CO ₂ e)	120,000	5,125	51,246

- B. This permit is issued based on negligible emissions of Sulfur Dioxide (SO₂) from fuel combustion. For this purpose, emissions shall not exceed 0.1 pounds/hour and 0.44 tons/year.
- C. This permit is issued based on negligible emissions of Volatile Organic Material from the processing of the sand. For this purpose, emissions shall not exceed 0.1 pounds/hour and 0.44 tons/year.
- d.
 - i. The total amount of sand produced by the affected plant shall not exceed 526,000 tons/month and 5,256,000 tons/year.
 - ii. This permit is issued based on negligible PM emissions from existing wet sand handling equipment at the plant. For this purpose, emissions shall not exceed 0.1 pounds/hour and 0.44 tons/year.
 - iii. The PM emissions of the affected plant, excluding fugitive emissions associated with roadways, shall not exceed 36.1 pounds/hour and 158.1 tons/year. Note: The limits on emissions of the affected plant are reduced as requested by the Permittee in Construction Permit Application #14060036.

Note: These limits, which address the expanded plant, will replace the limits in Conditions 5(a) and 5(c) of Construction Permit 10050019.

7. Emission Testing Requirements

- a. Within 60 days after achieving the maximum production rate at which the affected dryer will be operated, but not later than 180 days after initial startup, performance tests in accordance with requirements of 40 CFR 60.8 and 60.736, measurement of Particulate Matter (PM) emissions from the affected dryer, shall

be conducted during conditions which are representative of maximum emissions.

- b. The following methods and procedures shall be used for testing of emissions (refer to 40 CFR 60, Appendix A for USEPA test methods):

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Particulate Matter	USEPA Method 5
Opacity	USEPA Method 9

- c. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined.
 - iii. The specific determinations of emissions and operations which are intended to be made, including sampling and monitoring locations.
 - iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based.
 - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justifications.
 - vi. Any proposed use of an alternative test method, with detailed justification.
 - vii. The format and content of the Source Test Report.
- d. The Illinois EPA shall be notified prior to the PM emission tests to enable the Illinois EPA to observe these measurements. Notification of the expected date of the measurements shall be submitted to a minimum of 30 days prior to the expected date.

Notification of the actual date and expected time of measurement shall be submitted a minimum of five working days prior to the actual date of the measurement. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe the measurements.

- e. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 30 days after the test results are compiled and finalized.
 - f. The Final Report shall include as a minimum:
 - i. A summary of results.
 - ii. General information.
 - iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
 - iv. Detailed description of test conditions, including:
 - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption,
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing, and
 - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
 - vi. An explanation of any discrepancies among individual tests or anomalous data.
 - vii. The results of all quality control evaluation, including a copy of all quality control data.
8. Operational Monitoring
- a. For the baghouse for the affected dryer, the Permittee shall install, operate and maintain instrumentation for pressure drop across the baghouse. If data is not automatically recorded, the Permittee shall record the pressure drop measured by this device at least once during each operating day.

9. Recordkeeping Requirements

- a. Records of monitoring data for the baghouse required by the NSPS, 40 CFR 60.734, shall be retained for at least 2 years.
- b. The Permittee shall maintain an operating log or other records for the affected units and the affected plant that at a minimum include information that generally confirms proper operation of the affected units and the affected plant and detailed information describing any period in which any unit did not operate properly.
- c. The Permittee shall maintain records of the following items for the affected units and plant:
 - i. Sand production (tons/month and tons/year);
 - ii. PM emissions (tons/month and tons/year) with supporting calculations;
 - iii. Natural gas consumption (mmscf/month and mmscf/year); and
 - iv. NO_x, CO, VOM and GHG emissions (tons/month and tons/year) with supporting calculations.

10. General Requirements for Records

- a. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.

11. Reporting Requirements

- a. If there is a deviation from the requirements of this permit the Permittee shall submit a report to the Illinois EPA within 30 days after the deviation. The report shall describe the deviation, the probable cause of the deviation, the corrective actions taken, and any action taken to prevent future occurrences.

12. General Requirements for Reports and Notifications

- a. Two copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
412 SW Washington Street, Suite D
Peoria, Illinois 61602

13. Authorization to Operate

- a. The Permittee is allowed to operate the affected plant under this permit until final action is taken on the CAAPP application for the plant. This condition supersedes Standard Condition 6.

Please note that this permit was revised at the request of the Permittee to address two additional emission units, a conveyor (BC6-305) and a bucket elevator (EL6-305), to no longer address certain equipment that will not be installed as part of this project, and to make changes to the designations of certain emission units.

If you have any questions on this permit, please call Kevin Hecht at 217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REP:KTH:psj

cc: Region 2

ATTACHMENTS:

Table 1: Limits for Particulate Matter Emissions from Affected Units

Unit(s)	PM Factor Lb/Ton	PM Emissions		
		Lb/Hr	Ton/Mo	Ton/Yr
Affected Units Controlled by Baghouse DC3-300 (See Table 2)	----	0.69	----	3.00
Affected Units Controlled by Baghouse DC6-300 (See Table 3)	----	0.60	----	2.63
Affected Units Controlled by Baghouse BH04 (See Construction Permit No. 06030039 and Table 4)	----	---	----	---
Affected Units Controlled by Baghouse DC5-300 (See Table 5)	---	0.12	----	0.53
Affected Units Controlled by Baghouse BH5-010 (See Operating Permit No. 73031358 and Table 6)	----	----	----	----
Wet Sand Handling Equipment (See Table 7)		0.10		0.44
Total	----	1.51		6.60

Table 2: List of Affected Units Controlled by Baghouse DC3-300

RD3-030	9' x 46' Rotary Dryer
BC3-310	Belt Conveyor from Rotary Dryer to Scalping Screen
EL3-300	Bucket Elevator to Screen Tower Raw Storage Silo
SH3-300	Raw Storage Silo #1 for Screen Tower
VS3-300	Megatex Scalping Screen

Table 3: List of Affected Units Controlled by Baghouse DC6-300

BC5-300	Belt Conveyor from Bucket Elevator to Screen Tower Surge Hopper
EL5-300	Bucket Elevator to Screen Tower (Feed by Raw Storage Silo #1)
SH5-300	Surge Hopper #1
EL5-350	Bucket Elevator for Screen Tower Recycle
SH5-310	Surge Hopper #2
SH5-320	Surge Hopper #3
VS5-310	Megatex #1
VS5-320	Megatex #2
VS5-330	Megatex #3
VS5-340	Megatex #4
VS5-350	Megatex #5
VS5-360	Megatex #6
BC5-300	Screen Tower Belt Conveyor #1
BC5-310	Screen Tower Belt Conveyor #2
BC5-320	Screen Tower Belt Conveyor #3
BC5-340	Screen Tower Belt Conveyor #4
BC5-430	Screen Tower Belt Conveyor #5
BC5-440	Screen Tower Belt Conveyor #6
BC5-360	Screen Tower Belt Conveyor #7
BC5-370	Screen Tower Belt Conveyor #8
BC5-380	Screen Tower Belt Conveyor #9
EL5-310	Finish Product Bucket Elevator #1
EL5-320	Finish Product Bucket Elevator #2
EL5-330	Finish Product Bucket Elevator #3
EL5-340	Finish Product Bucket Elevator #4
TA5-400	Finish Product Silo #1
TA5-410	Finish Product Silo #2
TA5-420	Finish Product Silo #3
TA5-430	Finish Product Silo #4
TA5-440	Finish Product Silo #5
BC6-300	Belt Conveyor under Finish Product Silos
EL6-300	Bucket Elevator to Rail Loadout
BC6-310	Belt Conveyor to Wedron 2.5
TA6-300	Finish Product Pre Load Out Silo #1
TA6-310	Finish Product Pre Load Out Silo #2
LS6-300	Rail Load Spout
BC6-305	Belt Conveyor from Finish Product Silos (NEW)
EL6-305	Bucket Elevator to BC6-310 (NEW)
BC6-320	Belt Conveyor from BC-6-310
BC6-330	Belt Conveyor from BC6-320

Table 4: List of Affected Units Controlled by Baghouse BH-04 (at Technisand Wedron)

EL6-410	Bucket Elevator for Technisand Wedron Plant
TA6-400	Sand Storage Silo #1 at Technisand Wedron Plant
TA6-410	Sand Storage Silo #2 at Technisand Wedron Plant
BC6-430	Belt Conveyor #3 to Technisand Wedron Plant
BC6-440	Belt Conveyor under Storage Silos to Technisand Wedron Plant

Table 5: List of Affected Units Controlled by Baghouse DC5-300

EL3-200	Bucket Elevator for Wedron 2 Storage Dome
BC3-210	Belt Conveyor over Rail (modified BC10) to Dome

Table 6: List of Affected Units Controlled by Baghouse BH5-010

TA6-320	Sand Storage Silo for Transfer to Wedron 2.5
BC6-340	Belt Conveyor for Transfer to Wedron 2.5

Table 7: List of Other Affected Units

-----	Wet Sand Handling Equipment
-------	-----------------------------