T Square Associates

412-531-0700 www.tsquare.us

December 16, 2015

West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE,
Charleston, WV 25304

Dear Sir/Madam:

Attached is an Air Permit Application for an existing site - mineral products unloading, storage and loading for McKees Rocks Industrial Enterprises, Inc. Also included is a check in the amount of $1,000 for the permit fee, made out to WVDEP – Division of Air Quality.

Should you have any questions, please contact me at 412-531-0700 or Jim Lind at 412-331-3555.

Sincerely,

Peter H. Thompson

T Square Associates, Inc.

cc: Jim Lind, McKees Rocks Industrial Enterprises

MRIE Moundsville Transload	*Phone: 412-331-3555*
RR 2 Box 229 **Proctor, WV 26055-9734** (Facility)	*Fax: 412-331-0746*
149 Nichol Ave. McKees Rocks, PA 15136 (headquarters)	*Email: jlind@e-mrie.com*
	Date: 12/18/2015

APPLICATION FOR NSR CONSTRUCTION PERMIT FOR AN EXISTING SITE - MINERAL PRODUCTS UNLOADING, STORAGE AND LOADING.

Submitted to:	West Virginia Department of Environmental Protection Division of Air Quality 601 57th Street, SE, Charleston, WV 25304 Phone: 304 926 0475

Prepared by:	Ronald Huffman, QEP Peter H. Thompson T Square Associates, Inc. 221 Barth Avenue Pittsburgh, PA 15228 412-531-0700 pht@tsquare.us www.tsquare.us

Contents

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY)

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
McKees Rocks Industrial Enterprises

2. Federal Employer ID No. ***(FEIN):***
251204777

3. Name of facility *(if different from above):*

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☐ **BOTH**

5A. Applicant's mailing address:
149 Nichol Ave.

McKees Rocks, PA 15136

5B. Facility's present physical address:
RR 2 Box 229

Proctor, WV 26055-9734

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☐ **YES** ☒ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: Applicant is operating the site.

- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Sand Transloading Facility

10. North American Industry Classification System **(NAICS)** code for the facility:
49311

11A. DAQ Plant ID No. (for existing facilities only):
–

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
none

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B.**

On State Route 2, 2.3 miles south of Mitchall Power Plant.

12.B. New site address (if applicable):	12C. Nearest city or town: Moundsville	12D. County: Marshall
12.E. UTM Northing (KM): 4405419.20	12F. UTM Easting (KM): 515231.56	12G. UTM Zone: 17N

13. Briefly describe the proposed change(s) at the facility:
Establishment of facility to transload sand - barge or rail to inside storage to bulk truck.

14A. Provide the date of anticipated installation or change: / / – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: / /

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) .
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**
– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☒ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	☐ Storage Tanks
☐ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ *(Please use blue ink)* DATE: 12/10/15 *(Please use blue ink)*

35B. Printed name of signee:		35C. Title:
35D. E-mail:	36E. Phone: (412) 331-3555	36F. FAX:
36A. Printed name of contact person (if different from above): Peter H. Thompson		36B. Title: Consultant
36C. E-mail: pht@tsquare.us	36D. Phone: 412-531-0700	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☐ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☐ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ *Forward 1 copy of the application to the Title V Permitting Group and:*
- ☐ *For Title V Administrative Amendments:*
  - ☐ *NSR permit writer should notify Title V permit writer of draft permit,*
- ☐ *For Title V Minor Modifications:*
  - ☐ *Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
  - ☐ *NSR permit writer should notify Title V permit writer of draft permit.*
- ☐ *For Title V Significant Modifications processed in parallel with NSR Permit revision:*
  - ☐ *NSR permit writer should notify a Title V permit writer of draft permit,*
  - ☐ *Public notice should reference both 45CSR13 and Title V permits,*
  - ☐ *EPA has 45 day review period of a draft permit.*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A: Business Certificate

☐ If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A.

☐ If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A

Source must register as a business. This can be done online at https://www.business4wv.com/b4wvpublic/default.aspx .

State of West Virginia

Certificate

I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

MCKEES ROCKS INDUSTRIAL ENTERPRISES, INC.

Control Number: 9ABC0

a corporation formed under the laws of Pennsylvania has filed its "Application for Certificate of Authority" to transact business in West Virginia as required by the provisions of the West Virginia Code. I hereby declare the organization to be registered as a foreign corporation from its effective date of August 26, 2015.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia

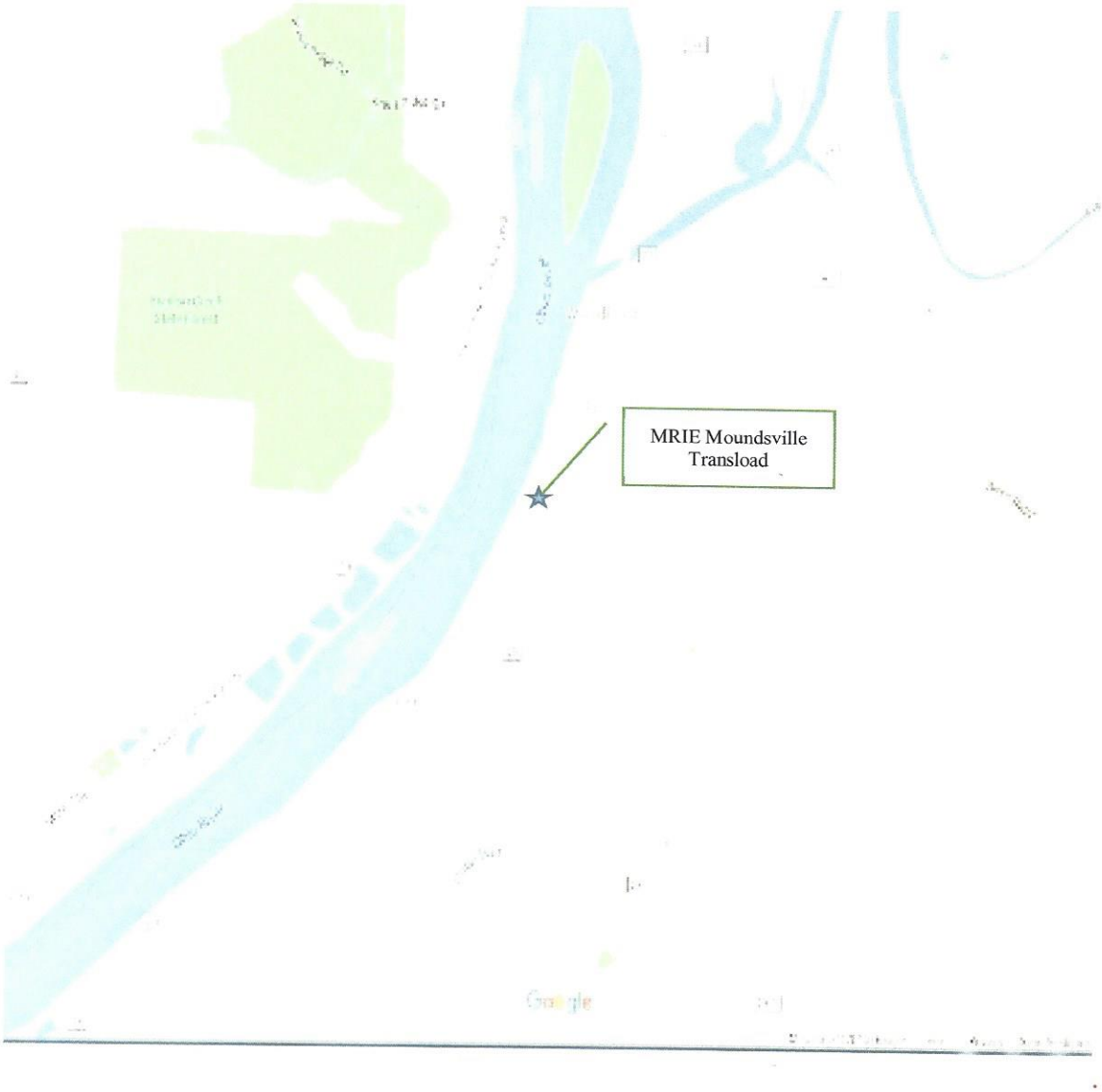
Given under my hand and the Great Seal of the State of West Virginia on this day of August 26, 2015

Natalie E Tennant

Secretary of State

Attachment B: Map(s)

General map here directions on the app form 12A



Attachment C: Installation and Start Up Schedule

This application is for an existing facility but only the empty building(s) are used for the material processing/ handling. The loading and unloading is expected to be done primarily by railcar and truck but the source will have access to a barge dock on the Ohio River. The facility plans to begin operations as soon as the air operating permit is issued.

STATE

45 CSR 13 - PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, AND PROCEDURES FOR EVALUATION:

The change in potential emissions associated with the proposed project are more than the minor source construction permit thresholds of 6 pounds per hour (pph) AND 10 tons per year (tpy) of any regulated air pollutant OR 144 pounds per day (ppd) of any regulated air pollutant OR 2 PPH or 5 tpy of aggregate hazardous air pollutants (HAP) OR 45 CSR 27 toxic air pollutant (TAP) (10% increase if above BAT triggers or increase to Best Available Technology (BAT) triggers OR subject to applicable Standard or Rule.

45 CSR 17 - TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MATERIALS HANDLING, PREPARATION, STORAGE AND OTHER SOURCES OF FUGITIVE PARTICULATE MATTER:

45CSR17 requires the prevention and control of PM from materials handling, preparation, storage, and other fugitive particulate sources beyond the property boundary through the appropriate use of preventative measures, which include but are not limited to water or chemicals, enclosure/covering of sources, and installation of hoods/fans/fabric filters. As part of this Application, MRIE Moundsville Transload will install fabric filters and/or enclosures, or take other preventative measures to reduce/prevent emissions from fugitive sources.

45 CSR 22 - AIR QUALITY MANAGEMENT FEE PROGRAM:

The facility is required to maintain a valid Certificate to Operate on the premises.

45 CSR 30 – REQUIREMENTS FOR OPERATING PERMITS:

Emissions from the facility do not exceed major source thresholds; therefore, this rule does not apply.

SUMMARY OF STATE RULES

http://www.dep.wv.gov/daq/rulessummary/Pages/default.aspx

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR2	TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGERS	AUGUST 31, 2000	NA
45CSR2A	TESTING, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS UNDER 45CSR2	MARCH 15, 2001	No fuel-burning units at this source.
45CSR3	TO PREVENT AND CONTROL AIR POLLUTION FROM THE OPERATION OF HOT MIX ASPHALT PLANTS	AUGUST 31, 2000	NA

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR4	TO PREVENT AND CONTROL THE DISCHARGE OF AIR POLLUTANTS INTO THE OPEN AIR WHICH CAUSES OR CONTRIBUTES TO AN OBJECTIONABLE ODOR OR ODORS	OCTOBER 1, 1967	NA
45CSR5	TO PREVENT AND CONTROL AIR POLLUTION FROM THE OPERATION OF COAL PREPARATION PLANTS, COAL HANDLING OPERATIONS AND COAL REFUSE DISPOSAL AREAS	AUGUST 31, 2000	NA
45CSR6	TO PREVENT AND CONTROL AIR POLLUTION FROM COMBUSTION OF REFUSE	JUNE 1, 2008	NA
45CSR7	TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MANUFACTURING PROCESSES AND ASSOCIATED OPERATIONS	AUGUST 31, 2000	The source shall control fugitive emissions per 45SCR7-5.
45CSR7A	COMPLIANCE TEST PROCEDURES FOR 45CSR7 TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM MANUFACTURING PROCESS OPERATIONS	FEBRUARY 1, 1999	NA
45CSR8	AMBIENT AIR QUALITY STANDARDS	JUNE 1, 2014	NA
45CSR10	TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF SULFUR OXIDES	AUGUST 31, 2000	NA
45CSR10A	TESTING, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS UNDER 45CSR10	JANUARY 25, 2002	NA
45CSR11	PREVENTION OF AIR POLLUTION EMERGENCY EPISODES	APRIL 25, 1990	NA
45CSR13	PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, AND PROCEDURES FOR EVALUATION	JUNE 1, 2009	Applicable. Compliance with the submission of this application.
45CSR13A	THE PERMITTING OF RESEARCH AND DEVELOPMENT (R&D) ACTIVITIES UNDER 45CSR13	MARCH 30, 2002	NA
45CSR13B	THE PERMITTING OF LABORATORY FACILTIES UNDER 45CSR13	MARCH 20, 2002	NA
45CSR14	PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES FOR THE PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY	JUNE 1, 2015	This site will not be a major stationary source.
45CSR16	STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES	JUNE 1. 2015	NA
45CSR17	TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MATERIALS HANDLING, PREPARATION, STORAGE AND OTHER SOURCES OF FUGITIVE PARTICULATE MATTER.	AUGUST 31, 2000	Comments above.
45CSR18	CONTROL OF AIR POLLUTION FROM COMBUSTION OF SOLID WASTE	JUNE 1, 2014	NA
45CSRR19	PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES WHICH CAUSE OR CONTRIBUTE TO NONATTAINMENT AREAS	JUNE 1, 2014	Non major source
45CSR20	GOOD ENGINEERING PRACTICE AS APPLICABLE TO STACK HEIGHTS	JULY 14, 1989	NA
45CSR21	REGULATION TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF VOLATILE ORGANIC COMPOUNDS	MAY 1, 1996	No VOCs in the process.
45CSR22	AIR QUALITY MANAGEMENT FEE PROGRAM	MAY 6, 1991	Comment above

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR23	TO PREVENT AND CONTROL EMISSIONS FROM MUNICIPAL SOLID WASTE LANDFILLS	JULY 1, 2001	NA
45CSR25	CONTROL AIR POLLUTION FROM HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	JUNE 1, 2015	NA
45CSR27	TO PREVENT AND CONTROL THE EMISSIONS OF TOXIC AIR POLLUTANTS	JUNE 30, 1990	None of the listed regulated toxic air pollutants are used or generated at this site.
45CSR28	AIR POLLUTANT EMISSIONS BANKING AND TRADING	AUGUST 31, 2000	NA
45CSR29	RULE REQUIRING THE SUBMISSION OF EMISSION STATEMENTS FOR VOLATILE ORGANIC COMPOUND EMISSIONS AND OXIDES OF NITROGEN EMISSIONS	JULY 7, 1993	NA
45CSR30	REQUIREMENTS FOR OPERATING PERMITS	JUNE 1, 2015	This site does not exceed the major level thresholds.
45CSR30A	DEFERRAL OF NONMAJOR AND AREA SOURCES FROM PERMITTING REQUIREMENTS	FEBRUARY 18, 2000	NA
45CSR30B	IDENTIFICATION AND COUNTING OF FUGITIVE EMISSIONS IN MAJOR SOURCE DETERMINATIONS UNDER WV 45CSR30	OCTOBER 5, 1995	All sources of emissions, including fugitive emissions, are considered in the evaluation for this site.
45CSR31	CONFIDENTIAL INFORMATION	SEPTEMBER 25, 1997	
45CSR31A	RELEASE OF PREVIOUSLY SUBMITTED CONFIDENTIAL INFORMATION	SEPTEMBER 21, 1998	NA
45CSR31B	CONFIDENTIAL BUSINESS INFORMATION AND EMISSION DATA	NOVEMBER 10, 2003	
45CSR32	SERIOUS AND MINOR VIOLATIONS OF APPLICABLE RULES	JULY 7, 1993	NA
45CSR33	ACID RAIN PROVISIONS AND PERMITS	June 1, 2010	NA
45CSR34	EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS	JUNE 1, 2015	The site is not a major source of HAP's.
45CSR35	DETERMINING CONFORMITY OF GENERAL FEDERAL ACTIONS TO APPLICABLE IMPLEMENTATION PLANS (GENERAL CONFORMITY)	JUNE 1, 2012	NA
45CSR36	REQUIREMENTS FOR DETERMINING CONFORMITY OF TRANSPORTATION PLANS, PROGRAMS, AND PROJECTS DEVELOPED, FUNDED OR APPROVED UNDER TITLE 23 U.S.C.OR THE FEDERAL TRANSIT ACT, TO APPLICABLE AIR QUALITY IMPLEMENTATION PLANS (TRANSPORTATION CONFORMITY)	JUNE 1, 2004	NA
45CSR38	PROVISIONS FOR DETERMINATION OF COMPLIANCE WITH AIR QUALITY MANAGEMENT RULES	MAY 1, 1995	NA
45CSR39	CONTROL OF ANNUAL NITROGEN OXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF FINE PARTICULATE MATTER AND NITROGEN OXIDES	MAY 1, 2008	NA
45CSR40	CONTROL OF OZONE SEASON NITROGEN OXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF OZONE AND NITROGEN OXIDES	MAY 1, 2008	NA

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR41	CONTROL OF ANNUAL SULFUR DIOXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF FINE PARTICULATE MATTER AND SULFUR DIOXIDE	MAY 1, 2008	NA
45CSR42	GREENHOUSE GAS EMISSIONS INVENTORY (REPEALED BY S.B.253)	JUNE 1, 2012	NA

FEDERAL

New Source Review (NSR) and Prevention of Significant Deterioration (PSD):
NSR and PSD do not apply. Excluding fugitive PM and PM10 emissions, the facility is a minor source for all criteria pollutants. Fugitive PM and PM10 emissions do not count towards the applicability of PSD because the source is not in one of the 28 source categories.

New Source Performance Standards
There are no NSPS requirements for the facilities at this source.

National Emission Standards For Hazardous Air Pollutants
This source is a minor source of hazardous air pollutants, as defined in 40 CFR 63.2. There are no area source rules that apply to the facilities at this source.

Risk Management Plan; CAA Section 112(r):
The source is not required to have a risk management plan at this time because none of the regulated chemicals exceed the thresholds on the regulation.

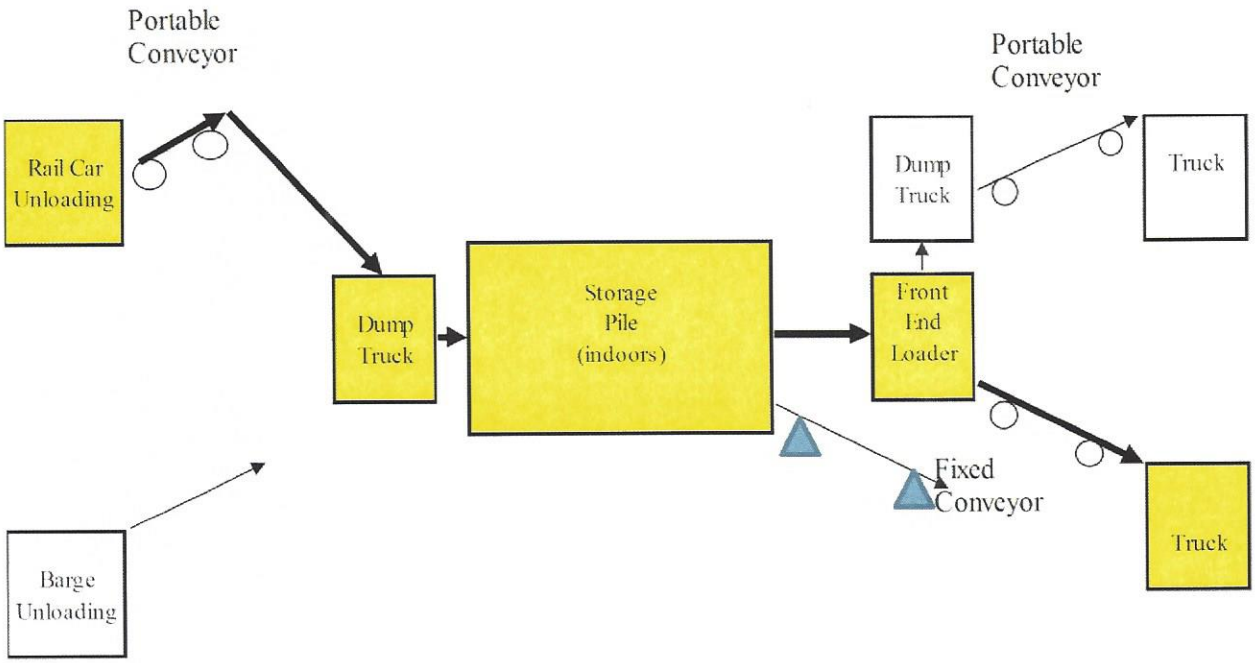
Attachment E: Plot Plan

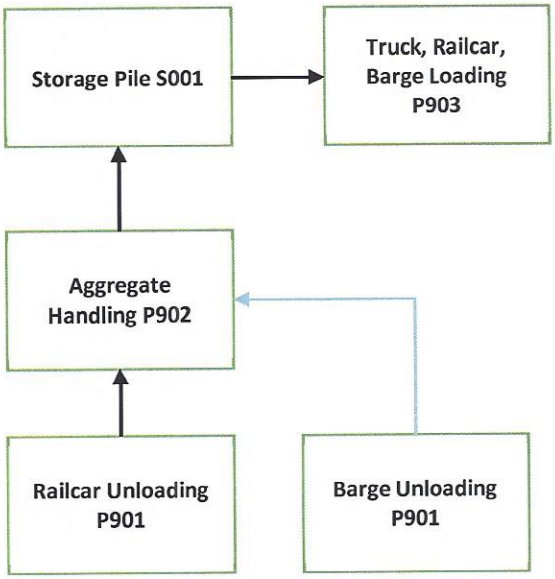
Distances
To nearest occupied building 3,000 feet
To nearest road 100 feet
To waterway (Ohio River) 500 feet

Building dimensions
400 ft. x 70 ft.
Center of building 638 ft. above sea level

Parking
Paved parking

Attachment F: Detailed Process Flow Diagram(s)





MRIE Moundsville Transload Process Flow Diagram

Attachment G: Process Description

The site is the former Columbian Chemical Company site, now owned by Consol Energy, leased by US Silica and operated by MRIE Moundsville Transload.

McKees Rocks Industrial Enterprises, Inc. - MRIE Moundsville Transload operates a bulk material transloading and storage facility located in Moundsville, WV. MRIE Moundsville Transload processes refractory materials (mostly silica sand). The operations at MRIE Moundsville Transload include barge and railcar unloading, storage, and barge, railcar, and truck loading. The equipment at MRIE Moundsville Transload includes a 321 horsepower diesel excavator, front-end loaders, dump trucks, portable and fixed conveyors, and unheated storage spaces. Particulate emissions from the unloading, conveyor and loading activities are uncontrolled. Emissions from the diesel excavator engine are uncontrolled and vent to stack ENG1. The excavator is a track-mounted vehicle. There two (2) 1,000 gallon fuel oil storage tanks. There are paved roadways and storage piles onsite. Fugitive particulate emissions from the storage piles are not controlled but are enclosed within a building. Fugitive particulate emissions from the paved roadways are controlled with sweeping for dust control. Most operations occur indoors.

U.S. SILICA COMPANY

Material Safety Data Sheet

Product Name: Silica Sand and Ground Silica
Product Description: Crystalline Silica

1. Identification of the substance/preparation and of the company/undertaking

1.1. Identification of the substance or preparation

Product Name/Trade Names:
Sand and Ground Silica Sand (flour) sold under various names: ASTM TESTING SANDS • GLASS SAND • FLINT SILICA • DM-SERIES • F-SERIES • FOUNDRY SANDS • FJ-SERIES • H-SERIES • L-SERIES • N-SERIES • NJ SERIES • OK-SERIES • P-SERIES • T-SERIES • HYDRAULIC FRACING SANDS • MIN-U-SIL® Fine Ground Silica • MYSTIC WHITE® • #1 DRY • #1 SPECIAL • PENN SAND@ • Q-ROK@ • SIL-CO-SIL® Ground Silica •MICROSIL® •Supersil® • MASON SAND • GS SERIES • PER-SPEC

Chemical Name or Synonym:
Silicon Dioxide ($Si0_2$). Sand, Silica Sand, Quartz, Crystalline Silica, Flint, Ground Silica (flour).

White or tan sand or ground silica with no odor.

1.2. Use of the Substance / Preparation

Main Applications (non-exhaustive list): abrasives, brick, ceramics, foundry castings, glass, grout, hydraulic frac (proppant) sand, mortar, paint and coatings, silicate chemistry, silicone rubber, thermoset plastics.

1.3. Company / Producer

U.S. Silica Company
8490 Progress Drive, Suite 300
Frederick, MD 21701
U.S.A.

Phone: 800-243-7500
Emergency Phone: 301-682-0600
Fax: 301-682-0690

2. Hazards Identification

2.1. EMERGENCY OVERVIEW:

The U. S. Silica Company material is a white or tan sand, or ground sand. It is not flammable, combustible or explosive. It does not cause burns or severe skin or eye irritation. A single exposure will not result in serious adverse health effects. Crystalline silica (quartz) is not known to be an environmental hazard.

Crystalline silica (quartz) is incompatible with hydrofluoric acid, fluorine, chlorine trifluoride or oxygen difluoride.

2.2. OSHA REGULATORY STATUS

This material is considered hazardous under the OSHA Hazard Communications Standard (29 CFR 1910.1200).

2.3. POTENTIAL HEALTH EFFECTS:

2.3.1. Inhalation:

a. Silicosis: Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

   Silicosis may be progressive; it may lead to disability and death.

b. Lung Cancer: Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans.

c. Tuberculosis: Silicosis increases the risk of tuberculosis.

d. Autoimmune and Chronic Kidney Diseases: Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica.

e. Non-Malignant Respiratory Diseases (other than silicosis): Some studies show an increased incidence in chronic bronchitis and emphysema in workers exposed to respirable crystalline silica.

2.3.2. Eye Contact:

Crystalline silica (quartz) may cause abrasion of the cornea.

2.3.3. Skin Contact:

Not applicable.

2.3.4. Ingestion:

Not applicable.

2.3.5. Chronic Effects:

The adverse health effects -- silicosis, lung cancer, autoimmune and chronic kidney diseases, tuberculosis, and non-malignant respiratory diseases-- are chronic effects.

2.3.6. Signs and Symptoms of Exposure:

Generally, there are no signs or symptoms of exposure to crystalline silica (quartz).

2.3.7. Medical Conditions Generally Aggravated by Exposure:

The condition of individuals with lung disease (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure.

See Section 11, Toxicological Information, for additional detail on potential adverse health effects.

3. Composition / Information on Ingredients

Component / CAS #		%
Crystalline Silica (quartz)	14808-60-7	98.7 - 99.9
Aluminum Oxide	1344-28-1	<1.1
Iron Oxide	1309-37-1	<0.1
Titanium Oxide	13463-67-7	<0.1

4. First Aid Measures

4.1. Eye Exposure:
Wash immediately with plenty of water. If irritation persists, seek medical attention.

4.2. Skin Exposure:
Not applicable

4.3. Inhalation:
No specific first-aid is necessary since the adverse health effects associated with exposure to crystalline silica (quartz) result from chronic exposures. If there is a gross inhalation of crystalline silica (quartz), remove the person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

4.4. Ingestion:
Not applicable

5. Fire Fighting Measures

5.1. Fire Hazard Data:

Autoignition: Not Applicable

Flash Point: Not Applicable

Flammability Limits (vol / vol%): **Lower:** Not Applicable **Upper:** Not Applicable

Extinguishing Media:
Product is not flammable, combustible or explosive. Use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures:
Use self contained breathing apparatus with full face mask.

Unusual Fire and Explosion Hazards:
None

6. Accidental Release Measures

6.1. Personal precautions:

Avoid dust formation. In case of dust exposure, wear protective equipment specified in Section 8 of this Safety Data Sheet.

Environmental precautions: No specific precautions. Discard any product, residue, disposable container or liner in compliance with regulatory requirements.

Methods for cleaning up: Avoid dry sweeping. Use water spraying / flushing or ventilated vacuum cleaning system. Use closed containers.

7. Handling and Storage

7.1. Handling

Avoid dust formation. Do not breathe dust. Use adequate exhaust ventilation and dust collection. Keep airborne dust concentrations below permissible national exposure limits. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud. In case of insufficient ventilation , wear a respirator approved for silica dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with EN standards. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing that has become dusty.

The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community "right-to-know" laws and regulations should be strictly followed.

DO NOT USE U.S. SILICA COMPANY MATERIALS FOR SAND BLASTING.

7.2. Storage

Ensure trapping of dust produced during loading and unloading. Keep containers closed and store bags as to avoid accidental bursting.

7.3. Specific uses

Apply safe handling recommendations in Section 7.1.

8. Exposure Controls / Personal Protection

8.1. Local Exhaust Ventilation:

Use sufficient local exhaust ventilation to reduce the level of respirable crystalline silica to below the OSHA PEL. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice" (latest edition).

8.2. Respiratory Protection:

If it is not possible to reduce airborne exposure levels to below the OSHA PEL with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the NIOSH Respirator Selection Logic, 2004, Chapter

III, Table 1, "Particulate Respirators". The full document can be found at www.cdc.gov/niosh/npptl/topics/respirators; the user of this MSDS is directed to that site for information concerning respirator selection and use. The assigned protection factor (APF) is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m^3, then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m^3.

Assigned protection factor'	Type of Respirator (Use only NIOSH-certified respirators)
10	Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter. [2] Appropriate filtering facepiece respirator. [2,3] Any air-purifying full facepiece respirator equipped with appropriate type of particulate filter. [2] Any negative pressure (demand) supplied-air respirator equipped with a half-mask.
25	Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter. Any continuous flow supplied-air respirator equipped with a hood or helmet.
50	Any air-purifying full facepiece respirator equipped with N-100, R-100, or P-100 filter(s). Any powered air-purifying respirator equipped with a tight-fitting facepiece (half or full facepiece) and a high-efficiency filter. Any negative pressure (demand) supplied-air respirator equipped with a full facepiece. Any continuous flow supplied-air respirator equipped with a tight-fitting facepiece (half or full facepiece). Any negative pressure (demand) self-contained respirator equipped with a full facepiece.
1,000	Any pressure-demand supplied-air respirator equipped with a half-mask.
The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910.134), (2) the use of NIOSH-certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers. Appropriate means that the filter medium will provide protection against the particulate in question. An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.	

8.3. Exposure controls

8.3.1. Occupational exposure controls / guidelines

Component	CAS No.	Percentage (by wt.)	OSHA PEL		ACGHI TLV		NISOSH REL		
			TWA	STEL	TWA	STEL	TWA	STEL	Unit
Crystalline Silica (quartz)	14808-60-7	99.0 — 99.9%	10 / % SiO_2 +2	None	0.025	None	0.05	None	mg / m^3

If crystalline silica (quartz) is heated to more than 870°C, it can change to a form of crystalline silica known as tridimite; if crystalline silica (quartz) is heated to more than1470°C it can change to a form of crystalline silica known as cristobalite. It OSHA PEL for crystalline silica as tridimite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

Engineering Controls:
Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in Section 8.1 of this Safety Data Sheet.

Respiratory Protection
In case of exposure to dust, and in any case if such exposure is above regulatory limits (see

above), wear a personal respirator as outlined in Section 8.2 above.

Eye / Face Protection:
If eye contact while using product may be anticipated, wear appropriate safety glasses with side shields or chemical goggles as described by European Standard EN 166.

Skin Protection
Wear chemical resistant gloves (such as latex or neoprene) and protective clothing to minimize skin contact. Substance may have drying effect on skin. Maintain good industrial hygiene. Protection recommended for workers suffering from dermatitis or sensitive skin.

8.3.2. Environmental Exposure Controls

No special requirements. There is no reported ecotoxicity for silica, a naturally occurring substance abundantly present in nature.

9. Physical and Chemical Properties

9.1. General Information

Physical State:	White or tan sand: granular, crushed or ground to a powder.
Odor:	None

9.2. Important Health, Safety and Environmental Information

pH:	6 - 8
Specific Gravity:	2.65 g/cc
Melting Point:	3110°F/1710°C
Freezing Point	Not Applicable
Boiling Point:	4046°F/2230°C
Flashpoint:	Not Applicable
Flammability:	Not Applicable
Explosive properties:	Not Applicable
Oxidizing properties:	contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride may cause fires.
Vapor Pressure:	None
Relative Density:	Not Applicable
Solubility:	Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride
Water Solubility:	**Insoluble**
Percent Volatiles by Volume:	Not Applicable
Viscosity:	Not Applicable
Vapor density:	Not Applicable
Molecular Weight:	60.08
Evaporation rate:	Not Applicable

10. Stability and Reactivity

10.1. Chemical Stability:
Stable

10.2. Conditions to Avoid:

Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride may cause fires

10.3. Materials / Chemicals to Be Avoided:

Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires.

10.4. Hazardous Decomposition Products:

Silica will dissolve in hydrofluoric acid and produce the corrosive gas silicon tetrafluoride (SiF4)-

10.5. Hazardous Polymerization:

Will not occur.

11. Toxicological Information

The method of exposure to crystalline silica that can lead to the adverse health effects described below is inhalation.

A. SILICOSIS

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute. Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pumonale). Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that there was *"sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is *"sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (Group* 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be

dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC

evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68,"Silica, Some Silicates..." (1997).

The EU Scientific Committee for Occupational Exposure Limits (SCOEL) concluded in June 2002 (SCOEL Sum Doc. 94-final): "The main effect in humans of inhalation of respirable silica dust is silicosis. There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk."

C. AUTOIMMUNE DISEASES

Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers. For a review of the subject, the following may be consulted: "Occupational Exposure to Crystalline Silica and Autoimmune Disease", Environmental Health Perspectives, Volume 107, Supplement 5, pp. 793-802 (1999); "Occupational Scleroderma", Current Opinion in Rheumatology, Volume 11, pp. 490-494 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); "Risk of pulmonary tuberculosis relative to silicosis and exposure to silica dust in South African gold miners," Occup Environ Med., Volume 55, pp.496-502 (1998).

E. KIDNEY DISEASE

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", Nephron, Volume 85, pp. 14-19 (2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below, for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

Sources of information:

The ***NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica*** published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The *NIOSH Hazard Review* should be consulted for additional information, and citations to published studies on health risks and diseases associated with occupational exposure to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica".

12. Ecological Information

12.1. Ecotoxicological Information:

Crystalline silica (quartz) is not known to be ecotoxic; i.e., there are no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

13. Disposal Considerations

13.1. Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with national regulations.

13.2. Container Handling and Disposal:

Dispose of container and unused contents in accordance with national regulations.

14. Transportation Information

Shipping Name:

ADR/RID/IMO/ICAO /US DOT	**Proper Shipping Name**	Not Regulated
	Hazard Class	**Not** Regulated
	ID Number	**Not** Regulated
	Packaging Group	**Not** Regulated

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101.

15. Regulatory Information

Silica sand has no harmonized classification & labeling under Directives 67/548/EEC and 1999/45/EC. Because the respirable fraction is high (10% and more) in ground silica (flour), the preparation is self-classified as Xn (harmful). In such case, the following risk and safety phrases are applicable.

Risk Phrases:

R 48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases:

S 22: Do not breathe dust

S 38: In case of insufficient ventilation, wear suitable respiratory equipment.

UNITED STATES (FEDERAL AND STATE)

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

Clean Air Act: Crystalline silica (quartz) mined and processed by U.S. Silica Company is not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

OSHA Carcinogen: Crystalline silica (quartz) is not listed.

California Proposition 65: Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 pg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

Pennsylvania Worker and Community Right to Know Act: Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

CANADA

Domestic Substances List: U. S. Silica Company products, as naturally occurring substances, are on the Canadian DSL.

WHMIS Classification: D2A

OTHER

EINECS No.: 238-878-4

EEC Label (Risk/Safety Phrases): R 48/20, S22, S38

CLP Label (Hazard Class/Hazard Statement/Precaution Statements):
STOT RE 1/ H372/ P260, P285, P501

IARC: Crystalline silica (quartz) is classified in IARC Group 1.

Australian Inventory of Chemical Substances (AICS): All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

Japan Ministry of International Trade and Industry (MITI): All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law Registry Number 1-548.

Korea Existing Chemicals Inventory (KECI) (set up under the Toxic Chemical Control Law): Listed on the ECL with registry number 9212-5667.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed for PICCS.

National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

16. Other Information

16.1 Hazardous Material Information System (HMIS):

Health	
Flammability	0
Reactivity	0
Protective Equipment	E

* For further information on health effects, see Sections 2, 8 and 11 of this MSDS.

16.2 National Fire Protection Association (NFPA):

Health	0
Flammability	0
Reactivity	0

16.3 Web Sites with Information about Effects of Crystalline Silica Exposure:

The U. S. Silica Company web site will provide updated links to OSHA and NIOSH web sites addressing crystalline silica issues: www.u-s-silica.com, click on "Info Center", then click on "Health & Safety".

U. S. Silica Company Disclaimer

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our silica. Customers and users of silica must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.

Attachment I: Emission Units Table

All emission units regulated by this permit are summarized in Table I-1:

TABLE I-1: Emission Unit Identification

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type and Date of Change	Control Device
P901	1E	Railcar/ Barge Unloading	2015	114 ton/hr[1]		None
S001	4E	Storage Piles	2015	1.0 MM tons/yr.		Enclosed building
P902	2E	Material Handling, Conveyors, Truck Dump, Front-end loaders	2015	2,000 ton/hr		None
P9003	3E	Truck/Railcar/Barge Loading	2015	114 ton/hr		None
ENG1	ENG1	Excavator Engine Make: Caterpillar Model: 345 (Mobile source)	2015	321 Hp		None
T001	5E	Fuel Oil Storage Tank	2015	1000 gallon		None
T002	6E	Fuel Oil Storage Tank	2015	1000 gallon		None
Roads	7E	Paved Roadways	unknown			

[1] The maximum hourly capacity is based on the annual capacity over 8,760 hours of operation.

Attachment J: Emission Points Data Summary Sheet

		Before Controls		
EU ID	**Description**	**PM**	**PM10**	**PM2.5**
P901	Railcar Unloading Operations	10.22	4.36	2.81
P902	Aggregate Handling *	0.928	0.439	0.000
P903	Railcar Loading Operations	8.50	4.59	2.18
S001	Storage Pile	0	0.0	0.0
ROADS	Paved Roadways *	6.42	2.78	0.68
	Totals (with Fugitives)	**26.07**	**12.17**	**5.68**
	Totals (without Fugitives)	**18.72**	**8.96**	**5.00**
	* Fugitive emissions			

Major assumptions used in the calculations:

- All material storage piles are inside a building. The material handling doors are closed except during material transfers.
- Railcar unloading and loading operations are calculated as the worst case.
- Fugitive roadway emissions are calculated with trucks at max load 13 tons per load & each moves 122 feet per load.
- Barge unloading and barge engine operation are calculated in the attached worksheets but not included in the overall site emissions. Barge unloading would be part of the site total capacity.

Attachment K: Fugitive Emissions Data Summary Sheet

		Before Controls		
EU ID	**Description**	**PM**	**PM10**	**PM2.5**
P901	Railcar Unloading Operations	10.22	4.36	2.81
P902	Aggregate Handling *	0.928	0.439	0.000
P903	Railcar Loading Operations	8.50	4.59	2.18
S001	Storage Pile	0	0.0	0.0
ROADS	Paved Roadways *	6.42	2.78	0.68
	Totals (with Fugitives)	**26.07**	**12.17**	**5.68**
	Totals (without Fugitives)	**18.72**	**8.96**	**5.00**
	* Fugitive emissions			

Attachment L: Emissions Unit Data Sheet(s)

EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

1. Name or type and model of proposed affected source: Silica Sand Transload and Storage Facility
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: Silica sand 114 tph
4. Name(s) and maximum amount of proposed material(s) produced per hour: Silica sand 114 tph
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: no chemical reactions or material processing occurs at the site

* ***The identification number which appears here must correspond to the air pollution control device identification number appearing on the*** **List Form.**

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ ambient °F and atmospheric psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}	2.78	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs		lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	PM2.5	1.30	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Fugitive dust	
REPORTING	TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Attachment L
FUGITIVE EMISSIONS FROM UNPAVED HAULROADS

UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
p =	Number of days per year with precipitation >0.01		

Item Number	Description	Number of Wheels	Mean Vehicle Weight (tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1									
2									
3									
4									
5									
6									
7									
8									

Source: *AP-42 Fifth Edition – 13.2.2 Unpaved Roads*

$E = k \times 5.9 \times (s \div 12) \times (S \div 30) \times (W \div 3)^{0.7} \times (w \div 4)^{0.5} \times ((365 - p) \div 365)$ = lb/Vehicle Mile Traveled

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
S =	Mean vehicle speed (mph)		
W =	Mean vehicle weight (tons)		
w =	Mean number of wheels per vehicle		
p =	Number of days per year with precipitation >0.01		

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF UNPAVED HAULROAD EMISSIONS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1								
2								
3								
4								
5								
6								
7								
8								
TOTALS								

FUGITIVE EMISSIONS FROM PAVED HAULROADS

INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	

Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1	Dump trucks	13	0.02		46154		
2	Front-end loader						
3							
4							
5							
6							
7							
8							

Source: *AP-42 Fifth Edition – 11.2.6 Industrial Paved Roads*

$E = 0.077 \times I \times (4 \div n) \times (s \div 10) \times (L \div 1000) \times (W \div 3)^{0.7}$ = lb/Vehicle Mile Traveled (VMT)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	
W =	Average vehicle weight (tons)	

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF PAVED HAULROAD EMISSIONS

Item No.	Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY
1	13.91	6.42		
2				
3				
4				
5				
6				
7				
8				
TOTALS	13.91	6.42		

Attachment M: Air Pollution Control Device Sheet(s)

No APCD's are used at the site.

Attachment N: Supporting Emissions Calculations

The supporting emissions calculations are included with this application as an Excel spreadsheet.

Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans

na

Attachment P: Public Notice

EXAMPLE LEGAL ADVERTISEMENT

Publication of a proper Class I legal advertisement is a requirement of the application process. In the event the applicant's legal advertisement fails to follow the requirements of 45CSR 13 (45-13-8) or the requirements of Chapter 59, Article 3, of the West Virginia Code, the application will be considered incomplete and no further review of the application will occur.

The applicant, utilizing the format for the Class I legal advertisement appearing below, shall cause such legal advertisement to appear a minimum of one (1) day in the newspaper most commonly read in the area where the facility exists or will be constructed. The notice must be published no earlier than five (5) working days of receipt by this office of your application. The original affidavit of publication must be received by this office no later than the last day of the public comment period.

The advertisement shall contain, at a minimum, the name of the applicant, the type and location of the source, the type and amount of air pollutants that will be discharged, the nature of the permit being sought, the proposed start-up date for the source and a contact telephone number for more information.

The location of the source should be as specific as possible starting with: 1.) the street address of the source; 2.) the nearest street or road; 3.) the nearest town or unincorporated area, 4.) the county, and 5.) latitude and longitude coordinates.

Types and amounts of pollutants discharged must include all regulated pollutants (PM, PM_{10}, VOC, SO_2, Xylene, etc.) and their potential to emit or the permit level being sought in units of tons per year (including fugitive emissions).

In the event the 30th day is a Saturday, Sunday, or legal holiday, the comment period will be extended until 5:00 p.m. on the following regularly scheduled business day.

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that

MRIE MOUNDSVILLE TRANSLOAD

has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a (Construction Permit) for a (Sand transload and storage facility) located on State Road 2 Box 229, (in/near Proctor 26055-9734), in (Marshall) County, West Virginia. The latitude and longitude coordinates are: 39.756777, -80.805414.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

Particulate Matter 26.07 tpy, Particulate Matter (10 µm) 12.17 tpy and Particulate Matter (2.5 µm) 5.68 tpy.

Startup of operation is planned to begin on or about the 1st day of January, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the **(Day)** day of **(Month)**, **(Year)**.

By: McKees Rocks Industrial Enterprises, Inc.
Jim Lind
President
149 Nichol Ave.
McKees Rocks, PA 15136

Attachment Q: Business Confidential Claims

na

Attachment R: Authority Forms

Na if Responsible Official signs application

Attachment S: Title V Permit Revision Information

N/A

Application Fee

The $1,000 application fee for a 45CSR13 NSR permit is enclosed per instructions in the R13-Instructions.pdf document.

Per WV Rule 22 (45CSR22) filed on May 6, 1991, a minimum fee of $1,000 must be submitted for each 45CSR13 permit application or $300 for each Class II administrative update application filed with the West Virginia Division of Air Quality. Other additional charges may apply, depending on the nature of the application as outlined in Section 3.4.b. of Regulation 22 and shown below:

NSPS Requirements (40CFR60)	$1,000
NESHAPS or Toxic Air Pollutant Requirements (40CFR 61, 63 and 45CSR27)	$2,500
PSD or Nonattainment Review (45CSR14 and 45CSR19):	
(1) New Major Sources or	$10,000
(2) Major Modifications	$ 5,000

Appendix A: Emission Calculations
Summary

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

		Potential to Emit (tons/yr)										
		Before Controls			After Controls and Limits							
EU ID	Description	PM	PM10	PM2.5	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs
P901	Railcar Unloading Operations	10.22	4.36	2.81	10.22	4.36	2.81					
P902	Aggregate Handling *	0.928	0.439	0.000	0.558	0.264	0.000					
P903	Railcar Loading Operations	8.50	4.59	2.18	8.50	4.59	2.18					
S001	Storage Pile	0	0.0	0.0	0	0.0	0.0					
ROADS	Paved Roadways *	6.42	2.78	0.68	3.21	1.39	0.34					
	Totals (with Fugitives)	**26.07**	**12.17**	**5.68**	**22.49**	**10.61**	**5.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Totals (without Fugitives)	**18.72**	**8.96**	**5.00**	**18.72**	**8.96**	**5.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	WV PSD Significance Levels 45CSR14					15	10	40	40	40	100	
	* Fugitive emissions				% of PSD SL	71%	53%	0%	0%			

Major assumptions used in the calculations
All storage piles are inside a building. The material handling doors are closed except during material transfers.
Railcar unloading and loading operations are calculated as the worse-case.
Fugitive roadway emissions are calculated with trucks at max load 13 tons per load & each moves 122 feet per load.
Barge unloading and barge engine operation are calculated in following worksheets but not included in the overall site emissions.

Appendix A: Emission Calculations
Fugitive Particulate Emissions From Railcar Unloading Operations - P901

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

1. Emission Factors

		Emission Factors (lb/ton)		
Type of Operation	**SCC**	**PM**	**PM10**	**PM2.5**
Batch Drop		8.8E-03	4.3E-03	1.6E-03
Conveyor transfer point (uncontrolled)	3-05-020-06	3.0E-03	1.1E-03	ND
Conveyor transfer point (controlled)	3-05-020-06	1.4E-04	4.6E-05	1.3E-05

Emission factors for conveyor transfer are from AP 42, Chapter 11.19.2, Crushed Stone Processing Table 11.19.2-2. (8/04)
Emission factors for front-end loader batch drop are from AP 42, Chapter 12.5, Iron and Steel Production, Table 12.5-4. (1/95)

2. Potential to Emit

EU ID	Source Description	Maximum Throughput (tons/hr)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	PM2.5 Emission Factor (lb/ton)	Capture/ Control Efficiency %	Uncontrolled Potential to Emit (ton/yr)			Controlled Potential to Emit (ton/yr)			Controlled Potential to Emit (lb/hr)		
							901	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5
P901	**Railcar Unloading Operations**														
P901a	Railcar Dump to Hopper	114	8.8E-03	4.3E-03	1.6E-03	0.0%	5.05	2.47	0.92	5.05	2.47	0.92	1.154	0.564	0.210
P901b	Hopper Transfer to Belt Conveyor	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
P901c	Belt Conveyor Transfer to Stacker	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
P901d	Stacker Transfer to Trucks	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
						TOTALS	**10.22**	**4.36**	**2.81**	**10.22**	**4.36**	**2.81**	**2.33**	**1.00**	**0.64**

Methodology
Uncontrolled Potential to Emit (tons/yr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 8,760 hr/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Controlled Potential to Emit (tons/yr) = Uncontrolled Potential to Emit (tons/yr) x (1 - Control Efficiency %)
Controlled Potential to Emit (lb/hr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 15% Adjustment Factor x (1 - Control Efficiency %)

Appendix A: Emission Calculations
Emissions for Material Conveying and Handling - P902

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

1. Emission Factors:

According to AP42, Chapter 13.2.4 - Aggregate Handling and Storage Piles (11/06), the PM/PM10 emission factors for material handling for batch or continuous drop operations can be estimated from the following equation:

$Ef = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ where:

Ef = Emission Factor (lbs/ton)
k = Particle size multiplier = 0.74 for PM and 0.35 for PM10 and 0.053 for PM2.5
U = Mean wind speed (mph) = 10
M = Moisture content (%) = 5.00

PM Emission Factor =	0.0016	lbs/ton
PM2.5 Emission Factor =	0.0008	lbs/ton
PM10 Emission Factor =	0.0001	

2. Potential PM/PM10 Emissions from Material Handling:

Drop Point Description	Maximum Throughput Capacity (tons/hr)	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	PTE of PM (lbs/hr)	PTE of PM10 (lbs/hr)	PTE of PM2.5 (lbs/hr)	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of PM2.5 (tons/yr)
Front End Loaders to Feeder Bins	114	0.0016	0.0008	0.0001	0.21	0.10	0.00	0.93	0.44	9.43E-07

Methodology
PTE of PM/PM10 (tons/yr) = Maximum Throughput Capacity (tons/hr) x Emission Factor (lbs/ton) x 8,760 hrs/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
PTE of PM/PM10 (lbs/hr) = Maximum Throughput Capacity (tons/hr) x Emission Factor (lbs/ton) x 15% Adjustment Factor

3. Limited PM/PM10 Emissions from Material Handling:

If the source takesg a voluntary limit on the hours of operation, the effect on emissions is
Limited hours of operation 8760 based on the limit of sand processed and the maximum throughput capacity (tons/yr)

Drop Point Description	Maximum Throughput Capacity (tons/hr)	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	PTE of PM (lbs/hr)	PTE of PM10 (lbs/hr)	PTE of PM2.5 (lbs/hr)	Limited PM (tons/yr)	Limited PM10 (tons/yr)	Limited PM2.5 (tons/yr)
Front End Loaders to Feeder Bins	68	0.0016	0.0008	0.0001	0.13	0.06	0.00	0.56	0.26	9.43E-07

Methodology
Limited PM/PM10 (tons/yr) = Maximum Throughput Capacity (tons/hr) x Emission Factor (lbs/ton) x 4,667 hrs/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Limited PM/PM10 (lbs/hr) = Limited PM/PM10 (tons/yr) x 2000/8,760

Appendix A: Emission Calculations
Fugitive Particulate Emissions From Railcar Loading Operations - P903

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

1. Emission Factors

		Emission Factors (lb/ton)		
Type of Operation	**SCC**	**PM**	**PM10**	**PM2.5**
Batch Drop		8.8E-03	5.8E-03	1.6E-03
Conveyor transfer point (uncontrolled)	3-05-020-06	3.0E-03	1.1E-03	ND
Conveyor transfer point (controlled)	3-05-020-06	1.4E-04	4.6E-05	1.3E-05

Emission factors for conveyor transfer are from AP 42, Chapter 11.19.2, Crushed Stone Processing Table 11.19.2-2. (8/04)
Emission factors for front-end loader batch drop are from AP 42, Chapter 12.5, Iron and Steel Production, Table 12.5-4. (1/95)

2. Potential to Emit

EU ID	Source Description	Maximum Throughput (tons/hr)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	PM2.5 Emission Factor (lb/ton)	Capture/ Control Efficiency %	Uncontrolled Potential to Emit (ton/yr)			Controlled Potential to Emit (ton/yr)			Controlled Potential to Emit (lb/hr)		
P903	**Railcar Loading Operations**						PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5
P903a	Front End Loader Dump to Hopper	114	8.8E-03	5.8E-03	1.6E-03	0.0%	5.05	3.33	0.92	5.05	3.33	0.92	1.154	0.760	0.210
P903b	Hopper Transfer to Conveyor Belt	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
P903c	Conveyor Belt Transfer to Railcar	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
						TOTALS	**8.50**	**4.59**	**2.18**	**8.50**	**4.59**	**2.18**	**1.94**	**1.05**	**0.50**

Methodology
Uncontrolled Potential to Emit (tons/yr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 8,760 hr/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Controlled Potential to Emit (tons/yr) = Uncontrolled Potential to Emit (tons/yr) x (1 - Control Efficiency %)
Controlled Potential to Emit (lb/hr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 15% Adjustment Factor x (1 - Control Efficiency %)

Appendix A: Emission Calculations
Particulate Emissions From Storage Piles

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

According to AP-42, Chapter 13.2.4 - Aggregate Handling and Storage Piles, the PM/PM10 emission factors for storage piles can be estimated from the following equation:

$$Ef = (0.0032 \times (U/5)^{1.3} \times k)/(M/2)^{1.4}$$

where:
Ef = Emission Factor (lbs/ton)
k = Particle size multiplier = 0.74 for PM and 0.35 for PM10 and 0.053 for PM2.5

2. Uncontrolled Potential to Emit (PTE) from Storage Piles

Emission Unit ID	Moisture Content (%)	Wind Speed (mph)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	PM2.5 Emission Factor (lb/ton)	Maximum Throughput Rate (tons/hr):	Potential to Emit (tons/yr)			Potential to Emit (lb/hr)		
							PM	PM10	PM2.5	PM	PM10	PM2.5
S001	0.5%	0	0.00	0.00	0.00	114.00	0	0	0	0	0.00	0.00
						Totals	**0**	**0**	0	**0.0**	**0.0**	**0.0**

PM10 = 0.35 x PM
Storage piles 1 and 2 are indoors. Therefore, wind speed equals zero.

Methodology
Uncontrolled PTE (ton/yr) = Maximum Throughput Rate (tons/hr) x Emission Factor (lbs/ton) x 8,760 hr/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Uncontrolled PTE (lb/hr) = Maximum Throughput Rate (tons/hr) x Emission Factor (lbs/ton) x 15% Adjustment Factor

The percent moisture is based on the MSDS. The moisture content is very low for the silica and is estimated to be no more than 0.5% here.

E = emission factor k = particle size multiplier (dimensionless) U = mean wind speed, meters per second (m/s) (miles per hour [mph]) M = material moisture content (%)

Appendix A: Emission Calculations
Fugitive Emissions for Paved Roads

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

1. Determine AP 42 Emission Factors

According to AP 42, Chapter 13.2.1 - Paved Roads (1/11), the PM/PM10 emission factors for paved roads can be estimated from the following equation:

$$E = [k \times (sL)^a \times (w)^b] \times (1 - P/4N)$$

where:

E = emission factor (lb/vehicle mile traveled)

sL (non-Winter) = road surface silt loading (g/m^2) =	70.0	(g/m^2) (AP 42, Table 13.2.1-3)
sL (Winter) = sL (non-Winter) x 4 (g/m^2) =	280.0	(g/m^2) (AP 42, Table 13.2.1-3)
w = mean vehicle weight (tons) =	17.0	tons
k = empirical constant =	0.011	for PM30 (TSP)
	0.0022	for PM10
	0.00054	for PM2.5
a = empirical constant =	0.91	
N = number of days in averaging period =	365	
b = empirical constant =	1.02	
p = number of days per year with 0.01 inches precipitation =	144	

PM Emission Factor (non-Winter) = $(0.011 \times (70)^{0.91} \times (w)^{1.02}) \times (1 - 144/1460)$ =	8.52	lbs/mile
PM10 Emission Factor (non-Winter) = $(0.0022 \times (70)^{0.91} \times (w)^{1.02}) \times (1 - 144/1460)$ =	6.02	lbs/mile
PM2.5 Emission Factor (non-Winter) = $(0.00054 \times (70)^{0.91} \times (w)^{1.02}) \times (1 - 144/1460)$ =	1.48	lbs/mile
PM Emission Factor (Winter) = $(0.011 \times (280)^{0.91} \times (w)^{1.02} \times (1 - 144/1460)$ =	30.08	lbs/mile
PM10 Emission Factor (Winter) = $(0.0022 \times (280)^{0.91} \times (w)^{1.02}) \times (1 - 144/1460)$ =	6.02	lbs/mile
PM2.5 Emission Factor (Winter) = $(0.00054 \times (280)^{0.91} \times (w)^{1.02}) \times (1 - 144/1460)$ =	1.48	lbs/mile

PM Emission Factor (Average Annual) = ((PM Emission Factor (non-Winter) x 9) + (PM Emission Factor (Winter) x 3))/12

PM Emission Factor (Average Annual) =	**13.91**	lbs/mile

PM10 Emission Factor (Average Annual) = ((PM10 Emission Factor (non-Winter) x 9) + (PM10 Emission Factor (Winter) x 3))/12

PM10 Emission Factor (Average Annual) =	**6.02**	lbs/mile

PM2.5 Emission Factor (Average Annual) = ((PM2.5 Emission Factor (non-Winter) x 9) + (PM2.5 Emission Factor (Winter) x 3))/12

PM10 Emission Factor (Average Annual) =	**1.48**	lbs/mile

2. Potential to Emit (PTE) PM/PM10

Vehicle Type	Average Weight of Vehicles (tons)*	Vehicle Mile Traveled (VMT) (miles/yr)	Traffic Component (%)	Component Vehicle Weight (tons)	PTE of PM Before Control (tons/yr)	PTE of PM10 Before Control (tons/yr)	PTE of PM2.5 Before Control (tons/yr)
Truck Traffic	17.0	923	100.0%	17.00	6.42	2.78	0.68

* This information is provided by the source. This is the weight of the heaviest truck.

Methodology
Vehicle Mile Traveled (miles/yr) = Trip Number (trips/yr) x Round Trip Distance (mile/trip)
Traffic Component (%) = VMT / Total VMT
Component Vehicle Weight = Average Weight of Vehicles (tons) x Traffic Component (%)
PTE of PM/PM10 Before Control (tons/yr) = VMT (miles/yr) x PM/PM10 Emission Factors (Average Annual) (lbs/mile) x 1 ton/2000 lbs

3. Controlled Potential to Emit (PTE) PM/PM10

The source will use periodic sweeping and watering to control the fugitive dust emissions.

Control Efficiency From Sweeping (%): 50% (Engineering estimate)

PTE of PM After Control (tons/yr) = PTE of PM Before Control (tons/yr) x (1 - Control Efficiency From Sweeping (%)) =	**3.21**
PTE of PM10 After Control (tons/yr) = PTE of PM10 Before Control (tons/yr) x (1 - Control Efficiency From Sweeping (%)) =	**1.39**
PTE of PM2.5 After Control (tons/yr) = PTE of PM2.5 Before Control (tons/yr) x (1 - Control Efficiency From Sweeping (%)) =	**0.34**

max material processed, tpy	600000	tpy
max material on truck, ton/loa	13	ton/load
	5.27	loads/hr
	46154	loads/yr
distance traveled per load	0.02	mile/load
total distance per yr, mile	923.08	mile/yr

Appendix A: Emission Calculations
Fugitive Particulate Emissions From Barge Unloading Operations - P901

Company Name: MRIE Moundsville Transload
Address: Proctor, WV

Reviewer: Ron Huffman
Date: December 9, 2015

1. Emission Factors

Type of Operation	SCC	Emission Factors (lb/ton) PM	PM10	PM2.5
Batch Drop		8.8E-03	4.3E-03	1.6E-03
Conveyor transfer point (uncontrolled)	3-05-020-06	3.0E-03	1.1E-03	ND
Conveyor transfer point (controlled)	3-05-020-06	1.4E-04	4.6E-05	1.3E-05

Emission factors for conveyor transfer are from AP 42, Chapter 11.19.2, Crushed Stone Processing Table 11.19.2-2. (8/04)
Emission factors for front-end loader batch drop are from AP 42, Chapter 12.5, Iron and Steel Production, Table 12.5-4. (1/95)

2. Potential to Emit

EU ID	Source Description	Maximum Throughput (tons/hr)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	PM2.5 Emission Factor (lb/ton)	Capture/ Control Efficiency %	Uncontrolled Potential to Emit (ton/yr) PM	PM10	PM2.5	Controlled Potential to Emit (ton/yr) PM	PM10	PM2.5	Controlled Potential to Emit (lb/hr) PM	PM10	PM2.5
	Barge Unloading Operations														
P901a	Barge Dump to Hopper	114	8.8E-03	4.3E-03	1.6E-03	0.0%	5.05	2.47	0.92	5.05	2.47	0.92	1.154	0.564	0.210
P901b	Hopper Transfer to Belt Conveyor	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
P901c	Belt Conveyor Transfer to Stacker	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
P901d	Stacker Transfer to Trucks	114	3.0E-03	1.1E-03	1.1E-03	0.0%	1.72	0.63	0.63	1.72	0.63	0.63	0.393	0.144	0.144
						TOTALS	**10.22**	**4.36**	**2.81**	**10.22**	**4.36**	**2.81**	**2.33**	**1.00**	**0.64**

Methodology
Uncontrolled Potential to Emit (tons/yr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 8,760 hr/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Controlled Potential to Emit (tons/yr) = Uncontrolled Potential to Emit (tons/yr) x (1 - Control Efficiency %)
Controlled Potential to Emit (lb/hr) = Max. Throughput (tons/hr) x Emission Factor (lb/ton) x 15% Adjustment Factor x (1 - Control Efficiency %)

Appendix A: Emission Calculations
Combustion Emissions for Internal Combustion Engines Firing Diesel Fuel > 600 hp

Company Name: MRIE Moundsville Transload
Address: Proctor, WV
Minor Source Operating Permit:
Reviewer: Ron Huffman
Date: December 9, 2015

1. Process Description

Emission Unit ID	Power Output (KW)	Power Output (hp)	Maximum Heat Input Capacity (MMBtu/hr)	Potential Hours of Operation (hr/yr)	Limited Hours of Operation (hr/yr)	Fuel Oil Sulfur Content (%)
Barge Unloading Engine (ENG1)		321	2.2	8760	1250	0.30

Assume an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr. (AP 42, Table 3.4-1, footnote e)

2. Combustion Emissions - Criteria Pollutants

	Emission Factor					
Source of Emission Factor (units)	PM	PM10	SO_2 *(0.0081S)*	NOx	VOC	CO
AP 42, Chapter 3.4 (lb/hp-hr)			2.43E-03	2.40E-02	7.00E-04	5.50E-03

Potential to Emit PM/PM10

Unit ID	Process Description	Control Device	Outlet Grain Loading (gr/dscf)[1]	Max. Air Flow Rate (scfm)[1]	PTE of PM/PM10 After Control (lbs/hr)	PTE of PM/PM10 After Control (tons/yr)	Capture Efficiency (%)	Control Efficiency (%)	Overall Control Efficiency (%)	PTE of PM/PM10 Before Control (lbs/hr)	PTE of PM/PM10 Before Control (tons/yr)
Barge Unloading Engine (ENG1)	Frac Sand	Dust Collector	0.01	588	0.05	0.22	100%	99.9%	100%	50.40	220.8

Assume all PM emissions equal PM10 emissions.
[1] Particulate emissions from the Barge Unloading System are limited by BACT requirements

Methodology
Overall Control Efficiency (%) = Capture Efficiency (%) x Control Efficiency (%)
PTE of PM/PM10 After Control (lbs/hr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7,000 lb/gr
PTE of PM/PM10 After Control (tons/yr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7,000 lb/gr x 8,760 hr/yr x 1 ton/2,000 lbs
PTE of PM/PM10 Before Control (lbs/hr) = PTE of PM/PM10 After Control (lbs/hr) / (1-Overall Control Efficiency)
PTE of PM/PM10 Before Control (tons/yr) = PTE of PM/PM10 After Control (tons/yr) / (1-Overall Control Efficiency)

	Potential to Emit (lb/hr)					
Emission Unit ID	PM	PM10	SO_2	NOx	VOC	CO
Barge Unloading Engine (ENG1)	0.05	0.05	0.90	8.9	0.26	2.03

	Potential to Emit (tons/yr)					
Emission Unit ID	PM	PM10	SO_2	NOx	VOC	CO
Barge Unloading Engine (ENG1)	0.22	0.22	3.9	39	1.13	8.9

	Limited Potential to Emit (tons/yr)					
Emission Unit ID	PM	PM10	SO_2	NOx	VOC	CO
Barge Unloading Engine (ENG1)	0.03	0.03	0.6	5.5	0.16	1.3

Emission factors for diesel engines are from AP 42, Chapter 3.4, Tables 3.4-1 and 3.4-2. (10/96)

Methodology
Potential to Emit (lbs/hr) = Power Output (hp) x Emission Factor (lb/hp-hr) x 15% Adjustment Factor
Potential to Emit (ton/yr) = Potential to Emit (lbs/hr) x 8,760 hr/yr x 1 ton/2,000 lb
Limited Potential to Emit (tons/yr) = Potential to Emit (lbs/hr) x Limited Hours of Operation (hr/yr) x 1 ton/2,000 lb

3. Combustion Emissions - Hazardous Air Pollutants

	Emission Factor (lb/MMBtu)						
	Acetaldehyde	Benzene	Formaldehyde	Naphthalene	Toluene	Xylene	Total HAPs
	2.52E-05	7.76E-04	7.89E-05	1.30E-04	2.81E-04	1.93E-04	1.49E-03

	Potential to Emit (tons/yr)						
Emission Unit ID	Acetaldehyde	Benzene	Formaldehyde	Naphthalene	Toluene	Xylene	Total HAPs
Barge Unloading Engine (ENG1)	2.85E-04	8.78E-03	8.93E-04	1.47E-03	3.18E-03	2.18E-03	1.69E-02

	Limited Potential to Emit (tons/yr)						
Emission Unit ID	Acetaldehyde	Benzene	Formaldehyde	Naphthalene	Toluene	Xylene	Total HAPs
Barge Unloading Engine (ENG1)	4.07E-05	1.25E-03	1.27E-04	2.10E-04	4.54E-04	3.12E-04	2.41E-03

Emission factors for diesel engines are from AP 42, Chapter 3.4, Tables 3.4-3 and 3.4-4. (10/96)

Methodology
Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 hrs/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Limited Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x Limited Hours of Operation (hr/yr) x 1 ton/2,000 lbs x 15% Adjustment Factor

MRIE Moundsville Transload	*Phone: 412-331-3555*
RR 2 Box 229 **Proctor, WV 26055-9734** (Facility)	*Fax: 412-331-0746*
149 Nichol Ave. McKees Rocks, PA 15136 (headquarters)	*Email: jlind@e-mrie.com*
	Date: 12/18/2015

APPLICATION FOR NSR CONSTRUCTION PERMIT FOR AN EXISTING SITE - MINERAL PRODUCTS UNLOADING, STORAGE AND LOADING.

Submitted to:	West Virginia Department of Environmental Protection Division of Air Quality 601 57th Street, SE, Charleston, WV 25304 Phone: 304 926 0475

Prepared by:	Ronald Huffman, QEP Peter H. Thompson T Square Associates, Inc. 221 Barth Avenue Pittsburgh, PA 15228 412-531-0700 pht@tsquare.us www.tsquare.us

Contents

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
McKees Rocks Industrial Enterprises

2. Federal Employer ID No. ***(FEIN):***
2 5 1 2 0 4 7 7 7

3. Name of facility *(if different from above):*

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☐ **BOTH**

5A. Applicant's mailing address:
149 Nichol Ave.

McKees Rocks, PA 15136

5B. Facility's present physical address:
RR 2 Box 229

Proctor, WV 26055-9734

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☐ **YES** ☒ **NO**

➪ If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**

➪ If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

➪ If **YES,** please explain: Applicant is operating the site.

➪ If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Sand Transloading Facility

10. North American Industry Classification System **(NAICS)** code for the facility:
49311

11A. DAQ Plant ID No. (for existing facilities only):
–

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
none

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- ➪ For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- ➪ For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

On State Route 2, 2.3 miles south of Mitchall Power Plant.

12.B. New site address (if applicable):	12C. Nearest city or town: Moundsville	12D. County: Marshall
12.E. UTM Northing (KM): 4405419.20	12F. UTM Easting (KM): 515231.56	12G. UTM Zone: 17N

13. Briefly describe the proposed change(s) at the facility:
Establishment of facility to transload sand - barge or rail to inside storage to bulk truck.

14A. Provide the date of anticipated installation or change: / / ➪ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: / /

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**

➪ Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**

➪ Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

➪ For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☒ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☐ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

- Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

- If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ DATE: _____

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee:		35C. Title:
35D. E-mail:	36E. Phone: (412) 331-3555	36F. FAX:
36A. Printed name of contact person (if different from above): Peter H. Thompson		36B. Title: Consultant
36C. E-mail: pht@tsquare.us	36D. Phone: 412-531-0700	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☐ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☐ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A: Business Certificate

☐ If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A.

☐ If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A

Source must register as a business. This can be done online at https://www.business4wv.com/b4wvpublic/default.aspx .

State of West Virginia

Certificate

I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

MCKEES ROCKS INDUSTRIAL ENTERPRISES, INC.

Control Number: 9ABC0

a corporation formed under the laws of Pennsylvania has filed its "Application for Certificate of Authority" to transact business in West Virginia as required by the provisions of the West Virginia Code. I hereby declare the organization to be registered as a foreign corporation from its effective date of August 26, 2015.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia

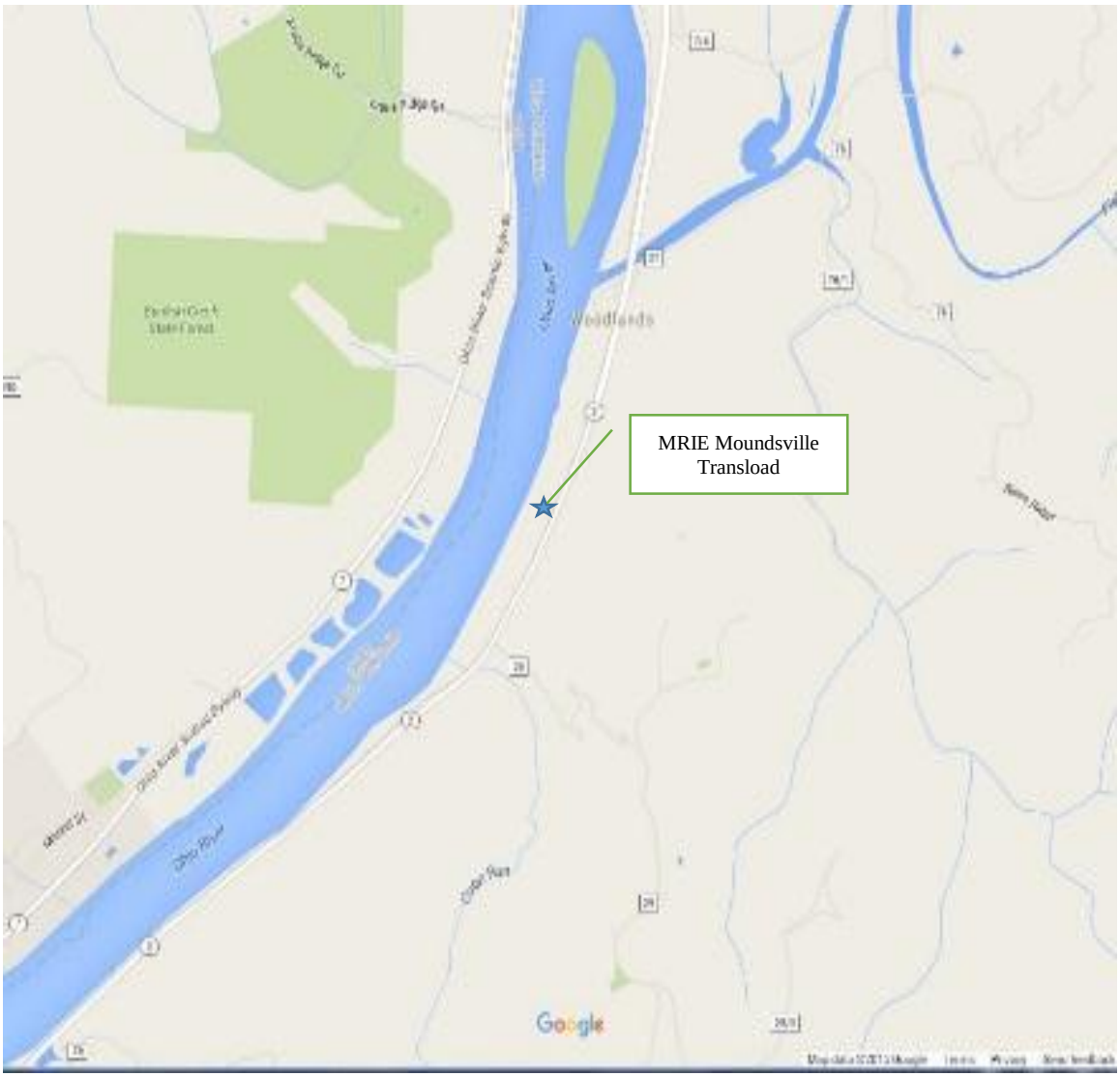
Given under my hand and the Great Seal of the State of West Virginia on this day of August 26, 2015

Natalie E Tennant

Secretary of State

Attachment B: Map(s)

General map here directions on the app form 12A



Attachment C: Installation and Start Up Schedule

This application is for an existing facility but only the empty building(s) are used for the material processing/ handling. The loading and unloading is expected to be done primarily by railcar and truck but the source will have access to a barge dock on the Ohio River. The facility plans to begin operations as soon as the air operating permit is issued.

STATE

45 CSR 13 - PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, AND PROCEDURES FOR EVALUATION:

The change in potential emissions associated with the proposed project are more than the minor source construction permit thresholds of 6 pounds per hour (pph) AND 10 tons per year (tpy) of any regulated air pollutant OR 144 pounds per day (ppd) of any regulated air pollutant OR 2 PPH or 5 tpy of aggregate hazardous air pollutants (HAP) OR 45 CSR 27 toxic air pollutant (TAP) (10% increase if above BAT triggers or increase to Best Available Technology (BAT) triggers OR subject to applicable Standard or Rule.

45 CSR 17 - TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MATERIALS HANDLING, PREPARATION, STORAGE AND OTHER SOURCES OF FUGITIVE PARTICULATE MATTER:

45CSR17 requires the prevention and control of PM from materials handling, preparation, storage, and other fugitive particulate sources beyond the property boundary through the appropriate use of preventative measures, which include but are not limited to water or chemicals, enclosure/covering of sources, and installation of hoods/fans/fabric filters. As part of this Application, MRIE Moundsville Transload will install fabric filters and/or enclosures, or take other preventative measures to reduce/prevent emissions from fugitive sources.

45 CSR 22 - AIR QUALITY MANAGEMENT FEE PROGRAM:

The facility is required to maintain a valid Certificate to Operate on the premises.

45 CSR 30 – REQUIREMENTS FOR OPERATING PERMITS:

Emissions from the facility do not exceed major source thresholds; therefore, this rule does not apply.

SUMMARY OF STATE RULES

http://www.dep.wv.gov/daq/rulessummary/Pages/default.aspx

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR2	TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGERS	AUGUST 31, 2000	NA
45CSR2A	TESTING, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS UNDER 45CSR2	MARCH 15, 2001	No fuel-burning units at this source.
45CSR3	TO PREVENT AND CONTROL AIR POLLUTION FROM THE OPERATION OF HOT MIX ASPHALT PLANTS	AUGUST 31, 2000	NA

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR4	TO PREVENT AND CONTROL THE DISCHARGE OF AIR POLLUTANTS INTO THE OPEN AIR WHICH CAUSES OR CONTRIBUTES TO AN OBJECTIONABLE ODOR OR ODORS	OCTOBER 1, 1967	NA
45CSR5	TO PREVENT AND CONTROL AIR POLLUTION FROM THE OPERATION OF COAL PREPARATION PLANTS, COAL HANDLING OPERATIONS AND COAL REFUSE DISPOSAL AREAS	AUGUST 31, 2000	NA
45CSR6	TO PREVENT AND CONTROL AIR POLLUTION FROM COMBUSTION OF REFUSE	JUNE 1, 2008	NA
45CSR7	TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MANUFACTURING PROCESSES AND ASSOCIATED OPERATIONS	AUGUST 31, 2000	The source shall control fugitive emissions per 45SCR7-5.
45CSR7A	COMPLIANCE TEST PROCEDURES FOR 45CSR7 TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM MANUFACTURING PROCESS OPERATIONS	FEBRUARY 1, 1999	NA
45CSR8	AMBIENT AIR QUALITY STANDARDS	JUNE 1, 2014	NA
45CSR10	TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF SULFUR OXIDES	AUGUST 31, 2000	NA
45CSR10A	TESTING, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS UNDER 45CSR10	JANUARY 25, 2002	NA
45CSR11	PREVENTION OF AIR POLLUTION EMERGENCY EPISODES	APRIL 25, 1990	NA
45CSR13	PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, AND PROCEDURES FOR EVALUATION	JUNE 1, 2009	Applicable. Compliance with the submission of this application.
45CSR13A	THE PERMITTING OF RESEARCH AND DEVELOPMENT (R&D) ACTIVITIES UNDER 45CSR13	MARCH 30, 2002	NA
45CSR13B	THE PERMITTING OF LABORATORY FACILTIES UNDER 45CSR13	MARCH 20, 2002	NA
45CSR14	PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES FOR THE PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY	JUNE 1, 2015	This site will not be a major stationary source.
45CSR16	STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES	JUNE 1. 2015	NA
45CSR17	TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MATERIALS HANDLING, PREPARATION, STORAGE AND OTHER SOURCES OF FUGITIVE PARTICULATE MATTER.	AUGUST 31, 2000	Comments above.
45CSR18	CONTROL OF AIR POLLUTION FROM COMBUSTION OF SOLID WASTE	JUNE 1, 2014	NA
45CSRR19	PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES WHICH CAUSE OR CONTRIBUTE TO NONATTAINMENT AREAS	JUNE 1, 2014	Non major source
45CSR20	GOOD ENGINEERING PRACTICE AS APPLICABLE TO STACK HEIGHTS	JULY 14, 1989	NA
45CSR21	REGULATION TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF VOLATILE ORGANIC COMPOUNDS	MAY 1, 1996	No VOCs in the process.
45CSR22	AIR QUALITY MANAGEMENT FEE PROGRAM	MAY 6, 1991	Comment above

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR23	TO PREVENT AND CONTROL EMISSIONS FROM MUNICIPAL SOLID WASTE LANDFILLS	JULY 1, 2001	NA
45CSR25	CONTROL AIR POLLUTION FROM HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	JUNE 1, 2015	NA
45CSR27	TO PREVENT AND CONTROL THE EMISSIONS OF TOXIC AIR POLLUTANTS	JUNE 30, 1990	None of the listed regulated toxic air pollutants are used or generated at this site.
45CSR28	AIR POLLUTANT EMISSIONS BANKING AND TRADING	AUGUST 31, 2000	NA
45CSR29	RULE REQUIRING THE SUBMISSION OF EMISSION STATEMENTS FOR VOLATILE ORGANIC COMPOUND EMISSIONS AND OXIDES OF NITROGEN EMISSIONS	JULY 7, 1993	NA
45CSR30	REQUIREMENTS FOR OPERATING PERMITS	JUNE 1, 2015	This site does not exceed the major level thresholds.
45CSR30A	DEFERRAL OF NONMAJOR AND AREA SOURCES FROM PERMITTING REQUIREMENTS	FEBRUARY 18, 2000	NA
45CSR30B	IDENTIFICATION AND COUNTING OF FUGITIVE EMISSIONS IN MAJOR SOURCE DETERMINATIONS UNDER WV 45CSR30	OCTOBER 5, 1995	All sources of emissions, including fugitive emissions, are considered in the evaluation for this site.
45CSR31	CONFIDENTIAL INFORMATION	SEPTEMBER 25, 1997	
45CSR31A	RELEASE OF PREVIOUSLY SUBMITTED CONFIDENTIAL INFORMATION	SEPTEMBER 21, 1998	NA
45CSR31B	CONFIDENTIAL BUSINESS INFORMATION AND EMISSION DATA	NOVEMBER 10, 2003	
45CSR32	SERIOUS AND MINOR VIOLATIONS OF APPLICABLE RULES	JULY 7, 1993	NA
45CSR33	ACID RAIN PROVISIONS AND PERMITS	June 1, 2010	NA
45CSR34	EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS	JUNE 1, 2015	The site is not a major source of HAP's.
45CSR35	DETERMINING CONFORMITY OF GENERAL FEDERAL ACTIONS TO APPLICABLE IMPLEMENTATION PLANS (GENERAL CONFORMITY)	JUNE 1, 2012	NA
45CSR36	REQUIREMENTS FOR DETERMINING CONFORMITY OF TRANSPORTATION PLANS, PROGRAMS, AND PROJECTS DEVELOPED, FUNDED OR APPROVED UNDER TITLE 23 U.S.C.OR THE FEDERAL TRANSIT ACT, TO APPLICABLE AIR QUALITY IMPLEMENTATION PLANS (TRANSPORTATION CONFORMITY)	JUNE 1, 2004	NA
45CSR38	PROVISIONS FOR DETERMINATION OF COMPLIANCE WITH AIR QUALITY MANAGEMENT RULES	MAY 1, 1995	NA
45CSR39	CONTROL OF ANNUAL NITROGEN OXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF FINE PARTICULATE MATTER AND NITROGEN OXIDES	MAY 1, 2008	NA
45CSR40	CONTROL OF OZONE SEASON NITROGEN OXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF OZONE AND NITROGEN OXIDES	MAY 1, 2008	NA

State Rule	Rule Title	Effective Date	Effect on current permit application
45CSR41	CONTROL OF ANNUAL SULFUR DIOXIDE EMISSIONS TO MITIGATE INTERSTATE TRANSPORT OF FINE PARTICULATE MATTER AND SULFUR DIOXIDE	MAY 1, 2008	NA
45CSR42	GREENHOUSE GAS EMISSIONS INVENTORY (REPEALED BY S.B.253)	JUNE 1, 2012	NA

FEDERAL

New Source Review (NSR) and Prevention of Significant Deterioration (PSD):
NSR and PSD do not apply. Excluding fugitive PM and PM10 emissions, the facility is a minor source for all criteria pollutants. Fugitive PM and PM10 emissions do not count towards the applicability of PSD because the source is not in one of the 28 source categories.

New Source Performance Standards
There are no NSPS requirements for the facilities at this source.

National Emission Standards For Hazardous Air Pollutants
This source is a minor source of hazardous air pollutants, as defined in 40 CFR 63.2. There are no area source rules that apply to the facilities at this source.

Risk Management Plan; CAA Section 112(r):
The source is not required to have a risk management plan at this time because none of the regulated chemicals exceed the thresholds on the regulation.

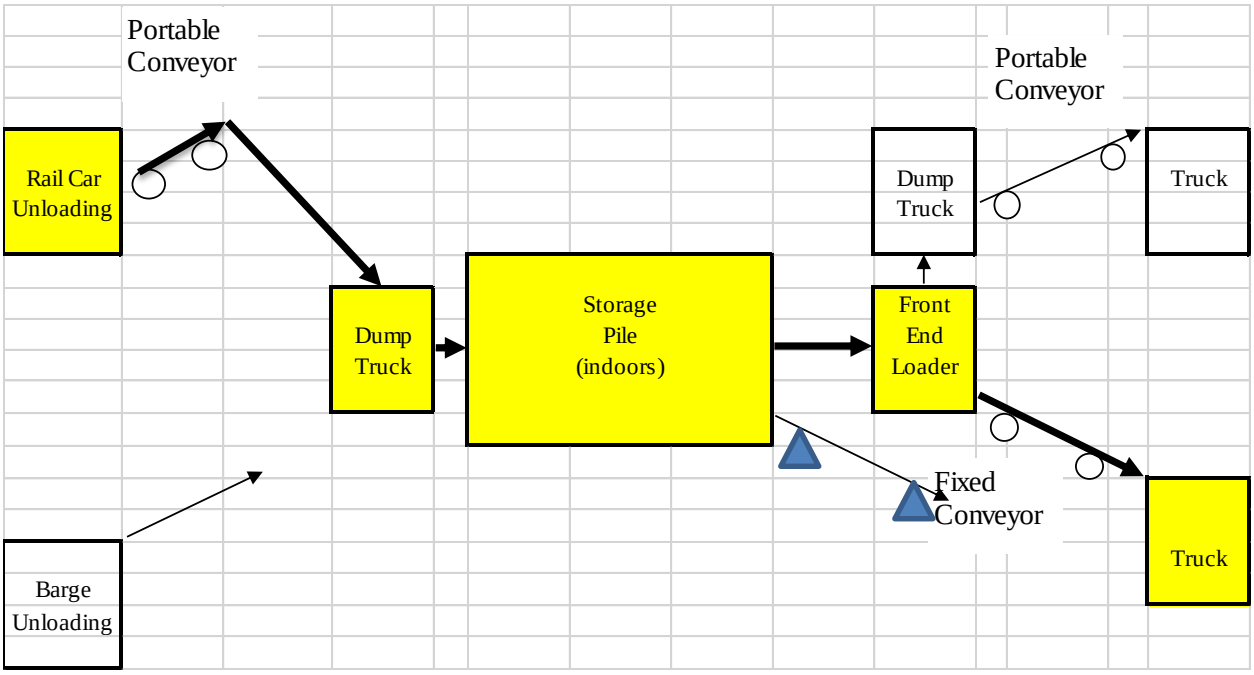
Attachment E: Plot Plan

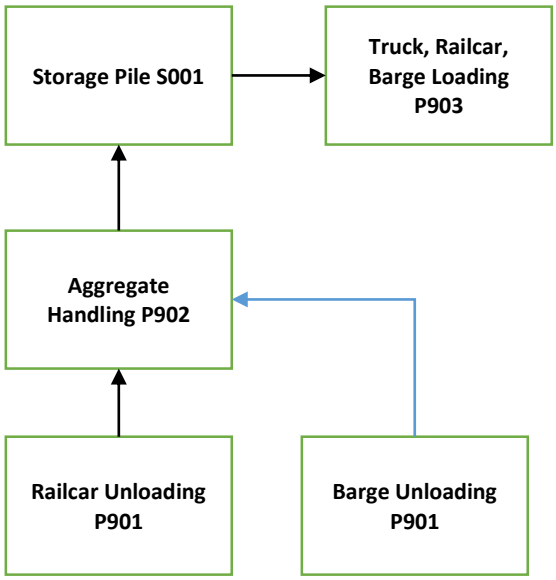
Distances
To nearest occupied building 3,000 feet
To nearest road 100 feet
To waterway (Ohio River) 500 feet

Building dimensions
400 ft. x 70 ft.
Center of building 638 ft. above sea level

Parking
Paved parking

Attachment F: Detailed Process Flow Diagram(s)





MRIE Moundsville Transload Process Flow Diagram

Attachment G: Process Description

The site is the former Columbian Chemical Company site, now owned by Consol Energy, leased by US Silica and operated by MRIE Moundsville Transload.

McKees Rocks Industrial Enterprises, Inc. - MRIE Moundsville Transload operates a bulk material transloading and storage facility located in Moundsville, WV. MRIE Moundsville Transload processes refractory materials (mostly silica sand). The operations at MRIE Moundsville Transload include barge and railcar unloading, storage, and barge, railcar, and truck loading. The equipment at MRIE Moundsville Transload includes a 321 horsepower diesel excavator, front-end loaders, dump trucks, portable and fixed conveyors, and unheated storage spaces. Particulate emissions from the unloading, conveyor and loading activities are uncontrolled. Emissions from the diesel excavator engine are uncontrolled and vent to stack ENG1. The excavator is a track-mounted vehicle. There two (2) 1,000 gallon fuel oil storage tanks. There are paved roadways and storage piles onsite. Fugitive particulate emissions from the storage piles are not controlled but are enclosed within a building. Fugitive particulate emissions from the paved roadways are controlled with sweeping for dust control. Most operations occur indoors.

U.S. SILICA COMPANY

Material Safety Data Sheet

Product Name: Silica Sand and Ground Silica
Product Description: Crystalline Silica

1. Identification of the substance/preparation and of the company/undertaking

1.1. Identification of the substance or preparation

Product Name/Trade Names:
Sand and Ground Silica Sand (flour) sold under various names: ASTM TESTING SANDS • GLASS SAND • FLINT SILICA • DM-SERIES • F-SERIES • FOUNDRY SANDS • FJ-SERIES • H-SERIES • L-SERIES • N-SERIES • NJ SERIES • OK-SERIES • P-SERIES • T-SERIES • HYDRAULIC FRACING SANDS • MIN-U-SIL® Fine Ground Silica • MYSTIC WHITE® • #1 DRY • #1 SPECIAL • PENN SAND@ • Q-ROK@ • SIL-CO-SIL® Ground Silica •MICROSIL® •Supersil® • MASON SAND • GS SERIES • PER-SPEC

Chemical Name or Synonym:
Silicon Dioxide ($Si0_2$). Sand, Silica Sand, Quartz, Crystalline Silica, Flint, Ground Silica (flour).

White or tan sand or ground silica with no odor.

1.2. Use of the Substance / Preparation

Main Applications (non-exhaustive list): abrasives, brick, ceramics, foundry castings, glass, grout, hydraulic frac (proppant) sand, mortar, paint and coatings, silicate chemistry, silicone rubber, thermoset plastics.

1.3. Company / Producer

U.S. Silica Company
8490 Progress Drive, Suite 300
Frederick, MD 21701
U.S.A.

Phone: 800-243-7500
Emergency Phone: 301-682-0600
Fax: 301-682-0690

2. Hazards Identification

2.1. EMERGENCY OVERVIEW:

The U. S. Silica Company material is a white or tan sand, or ground sand. It is not flammable, combustible or explosive. It does not cause burns or severe skin or eye irritation. A single exposure will not result in serious adverse health effects. Crystalline silica (quartz) is not known to be an environmental hazard.

Crystalline silica (quartz) is incompatible with hydrofluoric acid, fluorine, chlorine trifluoride or oxygen difluoride.

2.2. OSHA REGULATORY STATUS

This material is considered hazardous under the OSHA Hazard Communications Standard (29 CFR 1910.1200).

2.3. POTENTIAL HEALTH EFFECTS:

2.3.1. Inhalation:

a. Silicosis: Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

   Silicosis may be progressive; it may lead to disability and death.

b. Lung Cancer: Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans.

c. Tuberculosis: Silicosis increases the risk of tuberculosis.

d. Autoimmune and Chronic Kidney Diseases: Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica.

e. Non-Malignant Respiratory Diseases (other than silicosis): Some studies show an increased incidence in chronic bronchitis and emphysema in workers exposed to respirable crystalline silica.

2.3.2. Eye Contact:

Crystalline silica (quartz) may cause abrasion of the cornea.

2.3.3. Skin Contact:

Not applicable.

2.3.4. Ingestion:

Not applicable.

2.3.5. Chronic Effects:

The adverse health effects -- silicosis, lung cancer, autoimmune and chronic kidney diseases, tuberculosis, and non-malignant respiratory diseases-- are chronic effects.

2.3.6. Signs and Symptoms of Exposure:

Generally, there are no signs or symptoms of exposure to crystalline silica (quartz).

2.3.7. Medical Conditions Generally Aggravated by Exposure:

The condition of individuals with lung disease (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure.

See Section 11, Toxicological Information, for additional detail on potential adverse health effects.

3. Composition / Information on Ingredients

Component / CAS #		%
Crystalline Silica (quartz)	14808-60-7	98.7 - 99.9
Aluminum Oxide	1344-28-1	<1.1
Iron Oxide	1309-37-1	<0.1
Titanium Oxide	13463-67-7	<0.1

4. First Aid Measures

4.1. Eye Exposure:
Wash immediately with plenty of water. If irritation persists, seek medical attention.

4.2. Skin Exposure:
Not applicable

4.3. Inhalation:
No specific first-aid is necessary since the adverse health effects associated with exposure to crystalline silica (quartz) result from chronic exposures. If there is a gross inhalation of crystalline silica (quartz), remove the person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

4.4. Ingestion:
Not applicable

5. Fire Fighting Measures

5.1. Fire Hazard Data:

Autoignition: Not Applicable

Flash Point: Not Applicable

Flammability Limits (vol / vol%): **Lower:** Not Applicable **Upper:** Not Applicable

Extinguishing Media:
Product is not flammable, combustible or explosive. Use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures:
Use self contained breathing apparatus with full face mask.

Unusual Fire and Explosion Hazards:
None

6. Accidental Release Measures

6.1. Personal precautions:

Avoid dust formation. In case of dust exposure, wear protective equipment specified in Section 8 of this Safety Data Sheet.

Environmental precautions: No specific precautions. Discard any product, residue, disposable container or liner in compliance with regulatory requirements.

Methods for cleaning up: Avoid dry sweeping. Use water spraying / flushing or ventilated vacuum cleaning system. Use closed containers.

7. Handling and Storage

7.1. Handling

Avoid dust formation. Do not breathe dust. Use adequate exhaust ventilation and dust collection. Keep airborne dust concentrations below permissible national exposure limits. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud. In case of insufficient ventilation , wear a respirator approved for silica dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with EN standards. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing that has become dusty.

The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community "right-to-know" laws and regulations should be strictly followed.

DO NOT USE U.S. SILICA COMPANY MATERIALS FOR SAND BLASTING.

7.2. Storage

Ensure trapping of dust produced during loading and unloading. Keep containers closed and store bags as to avoid accidental bursting.

7.3. Specific uses

Apply safe handling recommendations in Section 7.1.

8. Exposure Controls / Personal Protection

8.1. Local Exhaust Ventilation:

Use sufficient local exhaust ventilation to reduce the level of respirable crystalline silica to below the OSHA PEL. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice" (latest edition).

8.2. Respiratory Protection:

If it is not possible to reduce airborne exposure levels to below the OSHA PEL with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the NIOSH Respirator Selection Logic, 2004, Chapter

III, Table 1, "Particulate Respirators". The full document can be found at www.cdc.gov/niosh/npptl/topics/respirators; the user of this MSDS is directed to that site for information concerning respirator selection and use. The assigned protection factor (APF) is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m^3, then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m^3.

Assigned protection factor'	Type of Respirator (Use only NIOSH-certified respirators)
10	Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter. [2] Appropriate filtering facepiece respirator. [2,3] Any air-purifying full facepiece respirator equipped with appropriate type of particulate filter. [2] Any negative pressure (demand) supplied-air respirator equipped with a half-mask.
25	Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter. Any continuous flow supplied-air respirator equipped with a hood or helmet.
50	Any air-purifying full facepiece respirator equipped with N-100, R-100, or P-100 filter(s). Any powered air-purifying respirator equipped with a tight-fitting facepiece (half or full facepiece) and a high-efficiency filter. Any negative pressure (demand) supplied-air respirator equipped with a full facepiece. Any continuous flow supplied-air respirator equipped with a tight-fitting facepiece (half or full facepiece). Any negative pressure (demand) self-contained respirator equipped with a full facepiece.
1,000	Any pressure-demand supplied-air respirator equipped with a half-mask.
The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910.134), (2) the use of NIOSH-certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers. Appropriate means that the filter medium will provide protection against the particulate in question. An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.	

8.3. Exposure controls

8.3.1. Occupational exposure controls / guidelines

Component	CAS No.	Percentage (by wt.)	OSHA PEL		ACGHI TLV		NISOSH REL		
			TWA	STEL	TWA	STEL	TWA	STEL	Unit
Crystalline Silica (quartz)	14808-7	99.0 — 99.9%	10 % SiO_2 +2	None	0.025	None	0.05	None	mg / m^3

If crystalline silica (quartz) is heated to more than 870°C, it can change to a form of crystalline silica known as tridimite; if crystalline silica (quartz) is heated to more than1470°C it can change to a form of crystalline silica known as cristobalite. It OSHA PEL for crystalline silica as tridimite or cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

Engineering Controls:
Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in Section 8.1 of this Safety Data Sheet.

Respiratory Protection
In case of exposure to dust, and in any case if such exposure is above regulatory limits (see

above), wear a personal respirator as outlined in Section 8.2 above.

Eye / Face Protection:
If eye contact while using product may be anticipated, wear appropriate safety glasses with side shields or chemical goggles as described by European Standard EN 166.

Skin Protection
Wear chemical resistant gloves (such as latex or neoprene) and protective clothing to minimize skin contact. Substance may have drying effect on skin. Maintain good industrial hygiene. Protection recommended for workers suffering from dermatitis or sensitive skin.

8.3.2. Environmental Exposure Controls

No special requirements. There is no reported ecotoxicity for silica, a naturally occurring substance abundantly present in nature.

9. Physical and Chemical Properties

9.1. General Information

Physical State:	White or tan sand: granular, crushed or ground to a powder.
Odor:	None

9.2. Important Health, Safety and Environmental Information

pH:	6 - 8
Specific Gravity:	2.65 g/cc
Melting Point:	3110°F/1710°C
Freezing Point	Not Applicable
Boiling Point:	4046°F/2230°C
Flashpoint:	Not Applicable
Flammability:	Not Applicable
Explosive properties:	Not Applicable
Oxidizing properties:	contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride may cause fires.
Vapor Pressure:	None
Relative Density:	Not Applicable
Solubility:	Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride
Water Solubility:	**Insoluble**
Percent Volatiles by Volume:	Not Applicable
Viscosity:	Not Applicable
Vapor density:	Not Applicable
Molecular Weight:	60.08
Evaporation rate:	Not Applicable

10. Stability and Reactivity

10.1. Chemical Stability:
Stable

10.2. Conditions to Avoid:

Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, and oxygen difluoride may cause fires

10.3. Materials / Chemicals to Be Avoided:

Contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires.

10.4. Hazardous Decomposition Products:

Silica will dissolve in hydrofluoric acid and produce the corrosive gas silicon tetrafluoride (SiF4)-

10.5. Hazardous Polymerization:

Will not occur.

11. Toxicological Information

The method of exposure to crystalline silica that can lead to the adverse health effects described below is inhalation.

A. SILICOSIS

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute. Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pumonale). Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that there was *"sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is *"sufficient evidence* in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (Group* 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be

dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC

evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68,"Silica, Some Silicates..." (1997).

The EU Scientific Committee for Occupational Exposure Limits (SCOEL) concluded in June 2002 (SCOEL Sum Doc. 94-final): "The main effect in humans of inhalation of respirable silica dust is silicosis. There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk."

C. AUTOIMMUNE DISEASES

Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers. For a review of the subject, the following may be consulted: "Occupational Exposure to Crystalline Silica and Autoimmune Disease", Environmental Health Perspectives, Volume 107, Supplement 5, pp. 793-802 (1999); "Occupational Scleroderma", Current Opinion in Rheumatology, Volume 11, pp. 490-494 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: Occupational Lung Disorders, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); "Risk of pulmonary tuberculosis relative to silicosis and exposure to silica dust in South African gold miners," Occup Environ Med., Volume 55, pp.496-502 (1998).

E. KIDNEY DISEASE

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", Nephron, Volume 85, pp. 14-19 (2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below, for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

Sources of information:

The ***NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica*** published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The *NIOSH Hazard Review* should be consulted for additional information, and citations to published studies on health risks and diseases associated with occupational exposure to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica".

12. Ecological Information

12.1. Ecotoxicological Information:

Crystalline silica (quartz) is not known to be ecotoxic; i.e., there are no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

13. Disposal Considerations

13.1. Waste Disposal Method:

Discard any product, residue, disposable container or liner in full compliance with national regulations.

13.2. Container Handling and Disposal:

Dispose of container and unused contents in accordance with national regulations.

14. Transportation Information

Shipping Name:

ADR/RID/IMO/ICAO /US DOT	**Proper Shipping Name**	Not Regulated
	Hazard Class	**Not** Regulated
	ID Number	**Not** Regulated
	Packaging Group	**Not** Regulated

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101.

15. Regulatory Information

Silica sand has no harmonized classification & labeling under Directives 67/548/EEC and 1999/45/EC. Because the respirable fraction is high (10% and more) in ground silica (flour), the preparation is self-classified as Xn (harmful). In such case, the following risk and safety phrases are applicable.

Risk Phrases:

R 48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases:

S 22: Do not breathe dust

S 38: In case of insufficient ventilation, wear suitable respiratory equipment.

UNITED STATES (FEDERAL AND STATE)

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

Clean Air Act: Crystalline silica (quartz) mined and processed by U.S. Silica Company is not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

OSHA Carcinogen: Crystalline silica (quartz) is not listed.

California Proposition 65: Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 pg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

Pennsylvania Worker and Community Right to Know Act: Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

CANADA

Domestic Substances List: U. S. Silica Company products, as naturally occurring substances, are on the Canadian DSL.

WHMIS Classification: D2A

OTHER

EINECS No.: 238-878-4

EEC Label (Risk/Safety Phrases): R 48/20, S22, S38

CLP Label (Hazard Class/Hazard Statement/Precaution Statements):
STOT RE 1/ H372/ P260, P285, P501

IARC: Crystalline silica (quartz) is classified in IARC Group 1.

Australian Inventory of Chemical Substances (AICS): All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

Japan Ministry of International Trade and Industry (MITI): All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law Registry Number 1-548.

Korea Existing Chemicals Inventory (KECI) (set up under the Toxic Chemical Control Law): Listed on the ECL with registry number 9212-5667.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed for PICCS.

National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

16. Other Information

16.1 Hazardous Material Information System (HMIS):

Health	
Flammability	0
Reactivity	0
Protective Equipment	E

* For further information on health effects, see Sections 2, 8 and 11 of this MSDS.

16.2 National Fire Protection Association (NFPA):

Health	0
Flammability	0
Reactivity	0

16.3 Web Sites with Information about Effects of Crystalline Silica Exposure:

The U. S. Silica Company web site will provide updated links to OSHA and NIOSH web sites addressing crystalline silica issues: www.u-s-silica.com, click on "Info Center", then click on "Health & Safety".

U. S. Silica Company Disclaimer

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our silica. Customers and users of silica must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.

Attachment I: Emission Units Table

All emission units regulated by this permit are summarized in Table I-1:

TABLE I-1: Emission Unit Identification

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type and Date of Change	Control Device
P901	1E	Railcar/ Barge Unloading	2015	114 ton/hr[1]		None
S001	4E	Storage Piles	2015	1.0 MM tons/yr.		Enclosed building
P902	2E	Material Handling, Conveyors, Truck Dump, Front-end loaders	2015	2,000 ton/hr		None
P9003	3E	Truck/Railcar/Barge Loading	2015	114 ton/hr		None
ENG1	ENG1	Excavator Engine Make: Caterpillar Model: 345 (Mobile source)	2015	321 Hp		None
T001	5E	Fuel Oil Storage Tank	2015	1000 gallon		None
T002	6E	Fuel Oil Storage Tank	2015	1000 gallon		None
Roads	7E	Paved Roadways	unknown			

[1] The maximum hourly capacity is based on the annual capacity over 8,760 hours of operation.

Attachment J: Emission Points Data Summary Sheet

		Before Controls		
EU ID	**Description**	**PM**	**PM10**	**PM2.5**
P901	Railcar Unloading Operations	10.22	4.36	2.81
P902	Aggregate Handling *	0.928	0.439	0.000
P903	Railcar Loading Operations	8.50	4.59	2.18
S001	Storage Pile	0	0.0	0.0
ROADS	Paved Roadways *	6.42	2.78	0.68
	Totals (with Fugitives)	**26.07**	**12.17**	**5.68**
	Totals (without Fugitives)	**18.72**	**8.96**	**5.00**
	* Fugitive emissions			

Major assumptions used in the calculations:

- All material storage piles are inside a building. The material handling doors are closed except during material transfers.
- Railcar unloading and loading operations are calculated as the worst case.
- Fugitive roadway emissions are calculated with trucks at max load 13 tons per load & each moves 122 feet per load.
- Barge unloading and barge engine operation are calculated in the attached worksheets but not included in the overall site emissions. Barge unloading would be part of the site total capacity.

Attachment K: Fugitive Emissions Data Summary Sheet

		Before Controls		
EU ID	**Description**	**PM**	**PM10**	**PM2.5**
P901	Railcar Unloading Operations	10.22	4.36	2.81
P902	Aggregate Handling *	0.928	0.439	0.000
P903	Railcar Loading Operations	8.50	4.59	2.18
S001	Storage Pile	0	0.0	0.0
ROADS	Paved Roadways *	6.42	2.78	0.68
	Totals (with Fugitives)	**26.07**	**12.17**	**5.68**
	Totals (without Fugitives)	**18.72**	**8.96**	**5.00**
	* Fugitive emissions			

Attachment L: Emissions Unit Data Sheet(s)
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*):

1. Name or type and model of proposed affected source: Silica Sand Transload and Storage Facility
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: Silica sand 114 tph
4. Name(s) and maximum amount of proposed material(s) produced per hour: Silica sand 114 tph
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: no chemical reactions or material processing occurs at the site

***** ***The identification number which appears here must correspond to the air pollution control device identification number appearing on the* List Form.**

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ ambient °F and atmospheric psia

a.	NO_X		lb/hr	grains/ACF
b.	SO_2		lb/hr	grains/ACF
c.	CO		lb/hr	grains/ACF
d.	PM_{10}	2.78	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs		lb/hr	grains/ACF
g.	Pb		lb/hr	grains/ACF
h.	Specify other(s)			
	PM2.5	1.30	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Fugitive dust	
REPORTING	TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Attachment L
FUGITIVE EMISSIONS FROM UNPAVED HAULROADS

UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
p =	Number of days per year with precipitation >0.01		

Item Number	Description	Number of Wheels	Mean Vehicle Weight (tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1									
2									
3									
4									
5									
6									
7									
8									

Source: *AP-42 Fifth Edition – 13.2.2 Unpaved Roads*

$E = k \times 5.9 \times (s \div 12) \times (S \div 30) \times (W \div 3)^{0.7} \times (w \div 4)^{0.5} \times ((365 - p) \div 365)$ = lb/Vehicle Mile Traveled

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
S =	Mean vehicle speed (mph)		
W =	Mean vehicle weight (tons)		
w =	Mean number of wheels per vehicle		
p =	Number of days per year with precipitation >0.01		

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF UNPAVED HAULROAD EMISSIONS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1								
2								
3								
4								
5								
6								
7								
8								
TOTALS								

FUGITIVE EMISSIONS FROM PAVED HAULROADS

INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	

Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1	Dump trucks	13	0.02		46154		
2	Front-end loader						
3							
4							
5							
6							
7							
8							

Source: *AP-42 Fifth Edition – 11.2.6 Industrial Paved Roads*

$E = 0.077 \times I \times (4 \div n) \times (s \div 10) \times (L \div 1000) \times (W \div 3)^{0.7}$ = lb/Vehicle Mile Traveled (VMT)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	
W =	Average vehicle weight (tons)	

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF PAVED HAULROAD EMISSIONS

Item No.	Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY
1	13.91	6.42		
2				
3				
4				
5				
6				
7				
8				
TOTALS	13.91	6.42		

Attachment M: Air Pollution Control Device Sheet(s)

No APCD's are used at the site.

Attachment N: Supporting Emissions Calculations

The supporting emissions calculations are included with this application as an Excel spreadsheet.

Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans

na

Attachment P: Public Notice

EXAMPLE LEGAL ADVERTISEMENT

Publication of a proper Class I legal advertisement is a requirement of the application process. In the event the applicant's legal advertisement fails to follow the requirements of 45CSR 13 (45-13-8) or the requirements of Chapter 59, Article 3, of the West Virginia Code, the application will be considered incomplete and no further review of the application will occur.

The applicant, utilizing the format for the Class I legal advertisement appearing below, shall cause such legal advertisement to appear a minimum of one (1) day in the newspaper most commonly read in the area where the facility exists or will be constructed. The notice must be published no earlier than five (5) working days of receipt by this office of your application. The original affidavit of publication must be received by this office no later than the last day of the public comment period.

The advertisement shall contain, at a minimum, the name of the applicant, the type and location of the source, the type and amount of air pollutants that will be discharged, the nature of the permit being sought, the proposed start-up date for the source and a contact telephone number for more information.

The location of the source should be as specific as possible starting with: 1.) the street address of the source; 2.) the nearest street or road; 3.) the nearest town or unincorporated area, 4.) the county, and 5.) latitude and longitude coordinates.

Types and amounts of pollutants discharged must include all regulated pollutants (PM, PM_{10}, VOC, SO_2, Xylene, etc.) and their potential to emit or the permit level being sought in units of tons per year (including fugitive emissions).

In the event the 30th day is a Saturday, Sunday, or legal holiday, the comment period will be extended until 5:00 p.m. on the following regularly scheduled business day.

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that

MRIE MOUNDSVILLE TRANSLOAD

has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a (Construction Permit) for a (Sand transload and storage facility) located on State Road 2 Box 229, (in/near Proctor 26055-9734), in (Marshall) County, West Virginia. The latitude and longitude coordinates are: 39.756777, -80.805414.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

Particulate Matter 26.07 tpy, Particulate Matter (10 µm) 12.17 tpy and Particulate Matter (2.5 µm) 5.68 tpy.

Startup of operation is planned to begin on or about the 1st day of January, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the **(Day)** day of **(Month)**, **(Year)**.

By: McKees Rocks Industrial Enterprises, Inc.
Jim Lind
President
149 Nichol Ave.
McKees Rocks, PA 15136

Attachment Q: Business Confidential Claims

na

Attachment R: Authority Forms

Na if Responsible Official signs application

Attachment S: Title V Permit Revision Information

N/A

Application Fee

The $1,000 application fee for a 45CSR13 NSR permit is enclosed per instructions in the R13-Instructions.pdf document.

Per WV Rule 22 (45CSR22) filed on May 6, 1991, a minimum fee of $1,000 must be submitted for each 45CSR13 permit application or $300 for each Class II administrative update application filed with the West Virginia Division of Air Quality. Other additional charges may apply, depending on the nature of the application as outlined in Section 3.4.b. of Regulation 22 and shown below:

NSPS Requirements (40CFR60)	$1,000
NESHAPS or Toxic Air Pollutant Requirements (40CFR 61, 63 and 45CSR27)	$2,500
PSD or Nonattainment Review (45CSR14 and 45CSR19):	
(1) New Major Sources or	$10,000
(2) Major Modifications	$ 5,000

Appendix A: Emission Calculations
Combustion Emissions for Internal Combustion Engines Firing Diesel Fuel > 600 hp

Company Name: MRIE Moundsville Transload
Address: Proctor, WV
Minor Source Operating Permit:
Reviewer: Ron Huffman
Date: December 9, 2015

1. Process Description

Emission Unit ID	Power Output (KW)	Power Output (hp)	Maximum Heat Input Capacity (MMBtu/hr)	Potential Hours of Operation (hr/yr)	Limited Hours of Operation (hr/yr)	Fuel Oil Sulfur Content (%)
Barge Unloading Engine (ENG1)		321	2.2	8760	1250	0.30

Assume an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr. (AP 42, Table 3.4-1, footnote e)

2. Combustion Emissions - Criteria Pollutants

	Emission Factor					
Source of Emission Factor (units)	**PM**	**PM10**	**SO_2** *(0.0081S)*	**NOx**	**VOC**	**CO**
AP 42, Chapter 3.4 (lb/hp-hr)			2.43E-03	2.40E-02	7.00E-04	5.50E-03

Potential to Emit PM/PM10

Unit ID	Process Description	Control Device	Outlet Grain Loading (gr/dscf)[1]	Max. Air Flow Rate (scfm)[1]	PTE of PM/PM10 After Control (lbs/hr)	PTE of PM/PM10 After Control (tons/yr)	Capture Efficiency (%)	Control Efficiency (%)	Overall Control Efficiency (%)	PTE of PM/PM10 Before Control (lbs/hr)	PTE of PM/PM10 Before Control (tons/yr)
Barge Unloading Engine (ENG1)	Frac Sand	Dust Collector	0.01	588	0.05	0.22	100%	99.9%	100%	50.40	220.8

Assume all PM emissions equal PM10 emissions.
[1] Particulate emissions from the Barge Unloading System are limited by BACT requirements

Methodology
Overall Control Efficiency (%) = Capture Efficiency (%) x Control Efficiency (%)
PTE of PM/PM10 After Control (lbs/hr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7,000 lb/gr
PTE of PM/PM10 After Control (tons/yr) = Outlet Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 mins/hr x 1/7,000 lb/gr x 8,760 hr/yr x 1 ton/2,000 lbs
PTE of PM/PM10 Before Control (lbs/hr) = PTE of PM/PM10 After Control (lbs/hr) / (1-Overall Control Efficiency)
PTE of PM/PM10 Before Control (tons/yr) = PTE of PM/PM10 After Control (tons/yr) / (1-Overall Control Efficiency)

	Potential to Emit (lb/hr)					
Emission Unit ID	**PM**	**PM10**	**SO_2**	**NOx**	**VOC**	**CO**
Barge Unloading Engine (ENG1)	0.05	0.05	0.90	8.9	0.26	2.03

	Potential to Emit (tons/yr)					
Emission Unit ID	**PM**	**PM10**	**SO_2**	**NOx**	**VOC**	**CO**
Barge Unloading Engine (ENG1)	0.22	0.22	3.9	39	1.13	8.9

	Limited Potential to Emit (tons/yr)					
Emission Unit ID	**PM**	**PM10**	**SO_2**	**NOx**	**VOC**	**CO**
Barge Unloading Engine (ENG1)	0.03	0.03	0.6	5.5	0.16	1.3

Emission factors for diesel engines are from AP 42, Chapter 3.4, Tables 3.4-1 and 3.4-2. (10/96)

Methodology
Potential to Emit (lbs/hr) = Power Output (hp) x Emission Factor (lb/hp-hr) x 15% Adjustment Factor
Potential to Emit (ton/yr) = Potential to Emit (lbs/hr) x 8,760 hr/yr x 1 ton/2,000 lb
Limited Potential to Emit (tons/yr) = Potential to Emit (lbs/hr) x Limited Hours of Operation (hr/yr) x 1 ton/2,000 lb

3. Combustion Emissions - Hazardous Air Pollutants

	Emission Factor (lb/MMBtu)						
Acetaldehyde	**Benzene**	**Formaldehyde**	**Naphthalene**	**Toluene**	**Xylene**	**Total HAPs**
2.52E-05	7.76E-04	7.89E-05	1.30E-04	2.81E-04	1.93E-04	1.49E-03

	Potential to Emit (tons/yr)						
Emission Unit ID	**Acetaldehyde**	**Benzene**	**Formaldehyde**	**Naphthalene**	**Toluene**	**Xylene**	**Total HAPs**
Barge Unloading Engine (ENG1)	2.85E-04	8.78E-03	8.93E-04	1.47E-03	3.18E-03	2.18E-03	1.69E-02

	Limited Potential to Emit (tons/yr)						
Emission Unit ID	**Acetaldehyde**	**Benzene**	**Formaldehyde**	**Naphthalene**	**Toluene**	**Xylene**	**Total HAPs**
Barge Unloading Engine (ENG1)	4.07E-05	1.25E-03	1.27E-04	2.10E-04	4.54E-04	3.12E-04	2.41E-03

Emission factors for diesel engines are from AP 42, Chapter 3.4, Tables 3.4-3 and 3.4-4. (10/96)

Methodology
Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 hrs/yr x 1 ton/2,000 lbs x 15% Adjustment Factor
Limited Potential to Emit (tons/yr) = Heat Input Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x Limited Hours of Operation (hr/yr) x 1 ton/2,000 lbs x 15% Adjustment Factor