



1/8/2014

Certified Mail

Bryan Brunton
SANDS HILL MINING LLC
38701 SR 160
P.O.Box 650
Hamden, OH 45634

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0682000050
Permit Number: P0090928
Permit Type: Renewal
County: Vinton

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
SANDS HILL MINING LLC**

Facility ID:	0682000050
Permit Number:	P0090928
Permit Type:	Renewal
Issued:	1/8/2014
Effective:	1/8/2014
Expiration:	1/8/2024



Division of Air Pollution Control
Permit-to-Install and Operate
for
SANDS HILL MINING LLC

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Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

Authorization

Facility ID: 0682000050
Application Number(s): A0022254, A0022255, A0022256, A0046307
Permit Number: P0090928
Permit Description: Renewal PTIO for F001 (coal prep plant), F002 (coal storage piles) and F003 (unpaved roadways and parking areas).
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 1/8/2014
Effective Date: 1/8/2014
Expiration Date: 1/8/2024
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

SANDS HILL MINING LLC
38701 ST. RT. 160
Hamden, OH 45634

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

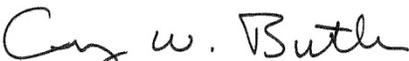
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Interim Director



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

Authorization (continued)

Permit Number: P0090928
Permit Description: Renewal PTIO for F001 (coal prep plant), F002 (coal storage piles) and F003 (unpaved roadways and parking areas).

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	F001
Company Equipment ID:	Prep Plant
Superseded Permit Number:	06-856
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	F002
Company Equipment ID:	Coal storage piles
Superseded Permit Number:	06-856
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	F003
Company Equipment ID:	Roadways & Parking
Superseded Permit Number:	06-856
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the



change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart Y, F001. The complete NSPS requirements may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District Office or local air agency.



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

C. Emissions Unit Terms and Conditions



1. F001, Prep Plant

Operations, Property and/or Equipment Description:

Coal Prep Plant with a Maximum Rating of 600 TPH, installed 1981, including a Gundlach 4024 Dam crusher with a heavy medial cyclone, a Jeffrey Flex-Tooth Crusher, coal wash and associated material handling of coal, including truck unloading into a hopper, 13 belt conveyors with 30 transfer points, and a maximum annual throughput of 2,000,000 TPY.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) shall not exceed 11.41 tons per year (TPY). Visible fugitive PE shall not exceed 20% opacity as a three-minute average. Best available control measures that are sufficient to minimize or eliminate visible emission of fugitive dust. See b)(2)a. – b)(2)d.
b.	40 CFR Part 60, Subpart Y (40 CFR 60.250-258) [In accordance with 40 CFR	The emissions limitations specified by this rule are less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	60.250(a) and 60.254(a), this emissions unit is a coal transfer and loading system constructed, reconstructed, or modified on or before April 28, 2008 at a coal preparation and processing plant that processes more than 200 tons of coal per day]	

(2) Additional Terms and Conditions

- a. The above handling operation that is covered by this permit and subject to the above-mentioned requirements is listed below:

Truck unloading into hopper (1)

Two (2) dry crushers

Coal Cleaning (1 wet crushing, 4 vibratory screens, 6 sieve screens)

Conveyor Belts (11 outside, 2 inside)

Transfer Points(30 total)

- b. The permittee shall employ best available control measures for the above-identified material handling operation for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure to ensure compliance:

Material Handling Operation(s)

Control Measure(s)

Truck unloading into hopper

Enclosures and reduced drop height

Dry Crushers (2)

Moisture content and enclosure

Coal Cleaning

Wet cleaning within an enclosure

Conveyor Belts

Enclosures and reduced drop height

Transfer Points

Enclosures and reduced drop height

Conveyor load in to storage piles

Moisture content and reduced drop height

- c. For each material handling operation that is not adequately enclosed, the above-identified control measures shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this



permit, that the control measures is necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure shall continue during the operation of the material handling operation until further observation confirms that use of the control measure is unnecessary.

d. Implementation of the above-mentioned control measure in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

<u>Material Handling Operation(s)</u>	<u>Minimum Inspection Frequency</u>
Truck unloading into hopper	Daily
Coal Cleaning/Prep Plant	Daily
Conveyor Belts	Daily
Transfer Points	Daily

The above mentioned inspections shall be performed during representative, normal operating conditions.

(2) The permittee shall maintain records of the following information:

- a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
- b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
- c. the dates the control measures were implemented; and
- d. on a calendar quarter basis, the total number of days the control measures were implemented.

The information required in d)(2)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.



e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "eBuisness Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall comply with the applicable reporting requirements under 40 CFR Part 60, Subpart Y, including the following section:

60.258(b)	Semiannual reporting
60.258(c)	Performance test reporting
60.258(d)	Report sent to U.S. EPA

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitations:
 Visible fugitive PE shall not exceed 20% opacity as a three-minute average.
 Applicable Compliance Method:
 If required, visible particulate emissions shall be determined according to USEPA Method 9.
 - b. Emissions Limitation:
 Fugitive PE shall not exceed 11.41 tons/year.
 Applicable Compliance Method:
 Compliance with the annual emission limitation shall be demonstrated by the following calculations based on the emission factors in AP-42 sections 11.19.2 (8/04) and the maximum annual throughput of 2,000,000 tons per year:



Truck unloading into hopper:

$$E \text{ (hopper load-in)} = k(0.0032)[(U/5)^{1.3}/(M/2)^{1.4}]$$

Where:

E = emission factor expressed in pounds per ton

k = particle size multiplier for TSP (dimensionless) = 0.74

U = mean wind speed expressed in miles per hour (MPH) = 10

M = material moisture content (%) = 25%

Control efficiency = 0% because factored into moisture content

Therefore, E (hopper load-in) = 0.00017 lb PE/ton

$$[(\text{Hopper load-in EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$$

$$[(0.00017 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/2,000 \text{ lbs/ton}$$

$$= 0.17 \text{ TPY PE}$$

Dry Crushing:

$$[(\text{number of crushers})(\text{Crushing EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$$

$$= [(2)(0.0012 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/2,000 \text{ lbs/ton}$$

$$= 2.4 \text{ tons per year of uncontrolled PE}$$

Assume 0% control efficiency because wet suppression is factored into EF.

Transfer Points:

$$[(\# \text{ of transfer points})(\text{transfer points EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$$

$$= [(30)(0.003 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/2,000 \text{ lbs/ton}$$

$$= 4.2 \text{ TPY uncontrolled PE}$$

Assume 0% control efficiency because wet suppression is factored into EF.

Coal Cleaning Process:

6 Sieve Screeners:

$$[(\text{number of screeners})(\text{Screening EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$$

$$[(6)(0.0022 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/2,000 \text{ lbs/ton}$$



= 13.2 tons per year of uncontrolled PE

Assume 80% control efficiency for building enclosure.

$(13.2 \text{ TPY}) (0.20) = 2.64 \text{ TPY PE}$

4 Vibratory Screeners:

$[(\text{number of screeners})(\text{Screening EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$

$[(4)(0.0022 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/2,000 \text{ lbs/ton}$

= 8.8 tons per year of uncontrolled PE

Assume 80% control efficiency for building enclosure.

$(8.8 \text{ TPY}) (0.20) = 1.76 \text{ TPY PE}$

Wet Crusher:

$[(\text{Crushing EF})(\text{Max Annual Tons})]/2,000 \text{ lbs/ton}$

= $[(0.0012 \text{ lb PE/ton})(2,000,000 \text{ TPY})]/ 2,000 \text{ lbs/ton}$

= 1.2 tons per year of uncontrolled PE

Assume 80% control efficiency for building enclosure.

$(1.2 \text{ TPY}) (0.20) = 0.24 \text{ TPY PE}$

Emissions Summary:

$(0.17 \text{ TPY})+(2.4 \text{ TPY})+(4.2 \text{ TPY})+(2.64 \text{ TPY})+(1.76 \text{ TPY})+(0.24 \text{ TPY}) = 11.41 \text{ TPY PE}$

- (2) The permittee shall conduct, or have conducted, visible emissions testing for all fugitive emissions points of this emissions unit, that are subject to 40 CFR Part 60, Subpart Y.
 - a. Testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart A, section 60.8 and 40 CFR Part 60, Subpart Y, section 60.675.
 - b. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, by not later than 180 days after initial startup of such facility and at such other times as may be required by the Ohio Environmental Protection Agency, Division of Air Pollution Control. The emission testing shall be conducted to demonstrate compliance with the allowable visible emission rates for particulate emissions.



- c. The following test methods shall be employed to demonstrate compliance with the allowable visible emissions rates:

Method 9 of 40 CFR Part 60, Appendix A shall be used to determine opacity.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate DO or LAA shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and /or the performance of the control equipment.
- g. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate DO or LAA within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate DO or LAA.

g) **Miscellaneous Requirements**

- (1) None.



2. F002, Storage Piles

Operations, Property and/or Equipment Description:

Storage piles of raw coal and processed coal with a maximum surface area of 35 acres and a maximum annual throughput of 2,000,000 TPY, installed in 1981.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>There shall be no visible fugitive particulate emissions (PE) except for one minute during any 60-minute period.</p> <p>Fugitive PE shall not exceed 17.3 tons per year (TPY).</p> <p>Best available control measures that are sufficient to minimize or eliminate visible emission of fugitive dust.</p> <p>See b)(2)a. – b)(2)f.</p>



(2) Additional Terms and Conditions

- a. The storage piles that are covered by this permit and subject to the requirements of OAC rule 3745-31-05(A)(3) are listed below, in addition to conveyor load in to storage piles (4):

All storage piles:

Raw Coal: up to 10 piles with a maximum total surface area of 5 acres

Processed Coal: up to 40 piles with a maximum total surface area of 30 acres

- b. The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintain sufficient moisture content of the material to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- c. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- d. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintain sufficient moisture content of the material to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- e. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- f. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.



c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

<u>Storage pile identification</u>	<u>Minimum load-in inspection frequency</u>
All	Daily

- (2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

<u>Storage pile identification</u>	<u>Minimum load-out inspection frequency</u>
All	Daily

- (3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

<u>Storage pile identification</u>	<u>Minimum wind erosion inspection frequency</u>
All	Daily

- (4) Except as otherwise provided in this section, the permittee shall perform inspections of the material handling associated with each storage pile in accordance with the following frequencies:

<u>Material Handling Operation</u>	<u>Minimum inspection frequency</u>
Conveyor load in to storage piles	Daily

- (5) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

- (6) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.



- (7) The permittee shall maintain records of the following information:
- a. The date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. The date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - c. The dates the control measures were implemented; and,
 - d. On a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(7)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "eBuisness Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

Fugitive PE shall not exceed 17.3TPY.

Applicable Compliance Method:

Compliance with the TPY emissions limitation shall be demonstrated by the following one time calculations using emission factors from AP 42, Compilation of Air Pollutant Emission Factors, Chapter 13.2.4, Equation 1 (issued 1/95) and Chapter 13.2.2, Equation 1a (issued 10/01).



Load-in/Load-out emissions:

$$EF = k \cdot 0.0032 \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$$

Where:

E = emission factor (lb. PE / ton coal transferred)

k = particle size multiplier (dimensionless) = 0.74

U = mean wind speed, miles per hour = 10 mph

M = material moisture content = 25%

Therefore, EF load-in/load-out = 0.00017 lb PE/ton

$$[(50+50)(0.00017 \text{ lb PE/ton})(2,000,000)] / 2,000 \text{ lbs/ton} \\ = 17.0 \text{ TPY PE}$$

Assume 25% control for precautionary measures

$$(17.0 \text{ TPY PE})(.75) = 12.75 \text{ TPY PE controlled}$$

Wind Erosion:

$$EF = 1.7 (s/1.5)(f/15)[(365 - p)/235]$$

Where

EF = lb./day/acre;

s = silt content = 4.6 %

p = Number of days per year with > 0.1 inch precipitation = 140

A = total surface area of piles = 35 acres

Therefore EF = 9.983 lbs/day/acre

$$[(\text{Wind erosion EF})(\text{number of acres})] / 2,000 \text{ lbs/day}$$

$$[(9.983 \text{ lbs/day/acre})(35 \text{ acres})(365)] / 2,000 \text{ lbs/day}$$

$$= 63.77 \text{ TPY PE uncontrolled}$$

Assume 30 % for precautionary measures and watering

$$(63.77)(0.70) = 3.19 \text{ TPY PE controlled}$$



Conveyor load-in to storage piles:

$$\text{Load-in EF} = k \cdot 0.0032 \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$$

Where:

E = emission factor (lb. PE / ton coal loaded)

k = particle size multiplier (dimensionless) = 0.74

U = mean wind speed, miles per hour = 10 mph

M = material moisture content = 25%

Therefore EF = 0.00017 lb PE/ton

4 load-in points with Max throughput of 2,000,000 TPY

$$[(4)(0.00017 \text{ lb PE/ton})(2,000,000 \text{ TPY})] / 2,000 \text{ lbs/ton}$$

$$\text{PE} = 1.36 \text{ TPY}$$

Emissions Summary:

$$(12.75 \text{ TPY}) + (3.19 \text{ TPY}) + (1.36 \text{ TPY}) = 17.3 \text{ TPY PE}$$

b. Emissions Limitation:

There shall be no visible PE of fugitive dust except for one minute during any 60-minute period.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

g) Miscellaneous Requirements

- (1) None.



3. F003, Roadways & Parking

Operations, Property and/or Equipment Description:

Unpaved roadways and parking areas with a maximum annual vehicle miles traveled of 73,641 (Supersedes PTI 06-856, issued 7/27/1983).

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (as established in PTI 06-856, issued 7/27/1983)	Fugitive particulate emissions (PE) shall not exceed 9.02 tons per year (TPY). No visible PE except for a period of time not to exceed three minutes during any 60-minute period. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)a.-b)(2)g.

(2) Additional Terms and Conditions

a. The roadways and parking areas that are covered by this permit and subject to the above mentioned requirements are listed below:



Unpaved Roadways:

All Coal Preparation Plant Roadways

Unpaved Parking Areas:

All Plant Parking Areas

- b. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with watering, surface improvements and speed control at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
 - c. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
 - d. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area, due to the application of certain types of dust suppressants, shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.
 - e. The permittee shall promptly remove, in such a manner as to minimize or prevent the resuspension of earth and/or other materials from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
 - f. Open bodied-vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
 - g. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.
- c) Operational Restrictions
- (1) None.



d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

Unpaved Roadways and Parking Areas: Minimum Inspection Frequency:

All

Daily

- (2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such events have ended, except if the next required inspection is within one week.
- (3) The permittee shall maintain records of the following information:
- a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - c. the dates the control measures were implemented; and
 - d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "eBuisness Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions Limitation:

Emissions of fugitive PE shall not exceed 9.02 TPY.

Applicable Compliance Method:

Compliance with the TPY emissions limitation shall be demonstrated by the following one time calculations using emission factors from AP 42, Compilation of Air Pollutant Emission Factors, Chapter 13.2.2, Equation 2 (issued 11/06). Should further updates in AP-42 occur, the most current equations for unpaved roads shall be used.

$$EF = [k(s/12)^a(W/3)^b((365-p)/365)]$$

Where:

EF = size-specific emissions factor in lb/VMT

s = silt content of road surface material = 5.1 %

W = mean vehicle weight in tons = 38.86 tons

a = constant (dimensionless) = 0.7

b = constant (dimensionless) = 0.45

k = particle size multiplier (dimensionless) = 4.9

p = number of rain days per year >0.01 in. = 140

Therefore EF = 5.25 lb/VMT

Maximum Annual VMT = 68,664 VMT/yr.

$$(68,664 \text{ VMT/yr})(5.25 \text{ lb/VMT})(1 \text{ ton}/2,000 \text{ lbs}) = 180.39 \text{ TPY uncontrolled PE}$$

Assume 95% control (for a three in 60-minute limitation)

$$(180.39)(1-0.95) = 9.02 \text{ TPY controlled PE}$$

b. Emissions Limitation:

No visible PE except for a period of time not to exceed three minutes during any 60-minute period.

Applicable Compliance Method:

If required, visible emissions of fugitive dust shall be determined according to USEPA Method 22.



Final Permit-to-Install and Operate
SANDS HILL MINING LLC
Permit Number: P0090928
Facility ID: 0682000050
Effective Date: 1/8/2014

g) Miscellaneous Requirements

- (1) None.