

WV Dept. of Environmental Protection – Div. of Air Quality

GENERAL PERMIT G40-C PERMIT PACKAGE

Applicant – TUNNEL RIDGE, LLC

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WV Dept. of Environmental Protection – Div. of Air Quality

GENERAL PERMIT G40-C PERMIT PACKAGE

Applicant – TUNNEL RIDGE, LLC

Location: 1901 Short Creek Road
Richland District
Ohio County, WV

Prepared For:
Tunnel Ridge, LLC
2596 Battle Run Road
Triadelphia, WV 26059



Prepared By:
JHA Companies
68011 Vineyard Road
St. Clairsville, Ohio 43950
Ph: (740) 695-6100
Fax: (740) 449-2343

Date Prepared: December 19, 2016



January 18, 2016

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

RE: Tunnel Ridge, LLC
Portable Crushing Unit
Application for General Permit Registration (Relocation)
G40-C – Nonmetallic Minerals Processing

To Whom It May Concern,

Please find attached two (2) original set and two electronic copies with signatures of an Application for General Permit Registration (G40-C – Nonmetallic Minerals Processing) for the relocation of a portable crushing unit to be in operation in Ohio County, WV. The crushing unit will be operated on an existing coal preparation plant site. If you have any questions, please contact my office at (304) 547-2937.

Sincerely,

Evan Midler



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): Tunnel Ridge, LLC		2. Federal Employer ID No. (FEIN): 7 3 1 6 1 8 1 3 7	
3. Name of facility (if different from above):		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 2596 Battle Run Road, Triadelphia, WV 26059		5B. Facility's present physical address: 1901 Short Creek Road, Wheeling WV 26003	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" type="checkbox"/> 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: Alliance Coal, LLC			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If YES, please explain: Tunnel Ridge, LLC leases the property from Alliance Resources General Partnership – 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.): crusher		10. North American Industry Classification System (NAICS) code for the facility: 2121	
11A. DAQ Plant ID No. (for existing facilities only): 0 6 6 – 0 0 0 9 9		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-2790A	

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

<p>12A.</p> <ul style="list-style-type: none"> For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; For Construction or Relocation permits, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B. <p>From SR 2 turn east onto SR 1, travel 2.65 miles. The entrance is on the south side of SR 1.</p>		
12.B. New site address (if applicable):	12C. Nearest city or town: Short Creek	12D. County: Ohio
12.E. UTM Northing (KM): 4444.739994	12F. UTM Easting (KM): 529.297959	12G. UTM Zone: 17
<p>13. Briefly describe the proposed change(s) at the facility: A rock crusher will be used.</p>		
<p>14A. Provide the date of anticipated installation or change: 01/25/2017</p> <ul style="list-style-type: none"> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: / / 		<p>14B. Date of anticipated Start-Up if a permit is granted: 01/25/2017</p>
<p>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).</p>		
<p>15. Provide maximum projected Operating Schedule of activity/activities outlined in this application: Hours Per Day 8 Days Per Week 5 Weeks Per Year 50</p>		
<p>16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>		
<p>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.</p>		
<p>18. Regulatory Discussion. List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). 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 (<i>if known</i>). Provide this information as Attachment D.</p>		
<p>Section II. Additional attachments and supporting documents.</p>		
<p>19. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).</p>		
<p>20. Include a Table of Contents as the first page of your application package.</p>		
<p>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) .</p> <ul style="list-style-type: none"> Indicate the location of the nearest occupied structure (e.g. church, school, business, residence). 		
<p>22. Provide a Detailed Process Flow Diagram(s) showing each proposed or modified emissions unit, emission point and control device as Attachment F.</p>		
<p>23. Provide a Process Description as Attachment G.</p> <ul style="list-style-type: none"> Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable). 		
<p>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</p>		

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:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input checked="" type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> 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:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> 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:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> 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: Evan Midler		35C. Title: Land Manager
35D. E-mail: evan.midler@arlp.com	35E. Phone: 304-547-2937	35F. FAX: 304-547-2940
36A. Printed name of contact person (if different from above):		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

WV Dept. of Environmental Protection – Div. of Air Quality

GENERAL PERMIT G40-C PERMIT PACKAGE

Applicant – TUNNEL RIDGE, LLC

Location: 1901 Short Creek Road
Richland District
Ohio County, WV

Prepared For:
Tunnel Ridge, LLC
2596 Battle Run Road
Triadelphia, WV 26059



ATTACHMENT A:
CURRENT BUSINESS CERTIFICATE

State of West Virginia



Certificate

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

TUNNEL RIDGE, LLC

was duly authorized under the laws of this state to transact business in West Virginia as a foreign limited liability company on August 08, 2001.

The company is filed as an at-will company, for an indefinite period.

I further certify that the LLC (PLLC) has not been revoked by the State of West Virginia nor has a Certificate of Cancellation been issued.

Therefore, I hereby issue this

CERTIFICATE OF AUTHORIZATION

Validation ID:0WV0Y_A89MX



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
June 28, 2016*

Natalie E. Tennant

Secretary of State

GENERAL PERMIT G40-C PERMIT PACKAGE

Tunnel Ridge, LLC
2596 Battle Run Road
Triadelphia, WV 26059



ATTACHMENT B: PROCESS DESCRIPTION

The purpose of this Application for General Permit Registration is to setup a portable rock crushing unit to crush rock excavated at a previously permitted coal mine preparation plant and refuse site in Ohio County, West Virginia. This processed rock will be placed onsite for various uses, such as riprap, energy dissipaters or fill material.

The process will begin with a hydraulic loader moving previously stockpiled rock to the Metso 2008 LT-106 Track Jaw Crusher feeder hopper(1). The vibrating grizzly feeder hopper transfers the rock to the jaw crusher(2). The material will go from the jaw crusher to the main product conveyor. A factory installed water spray bar will provide for dust suppression for the main product conveyor. From the conveyors, the processed rock will go to a screen. The double deck screen will then send different sized material onto one of two conveyor belts. These two conveyor belts will make separate stockpiles. A water truck will provide dust suppression for the stockpiles. The processed rock will be stockpiled for use in site activities at a later date.

GENERAL PERMIT G40-C PERMIT PACKAGE

Tunnel Ridge, LLC
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ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS

The potential sources of fugitive particulate emissions are:

1. Feeding Vibratory Grizzly Feeder Hopper
2. Vibrating Grizzly Feeder Hopper
3. Jaw Crusher
4. Main Product Conveyor
5. Crusher Conveyor to Screen Hopper
6. Screen Hopper to conveyor
7. Conveyor to screen
8. Screen to conveyor
9. Screen to side conveyor

The primary fugitive dust control equipment will be a 3,000 gallon water truck. The water truck will be used primarily to control fugitive particulate emissions on the haul roads, and stock piles. By wetting the material in the surge pile and stockpile, fugitive particulate emissions will also be controlled at the receiving hopper and conveyor by moisture carryover. The water truck has a maximum application rate of approximately 10,000 gph and application frequency will be dependent on environmental conditions. The frequency will vary from zero during rainy conditions to approximately four to five applications per day during extremely dry conditions. In addition to the water truck, a factory installed spray bar on the main product conveyor will be used. This spray system has a maximum application rate of 1,000 gph. Again the frequency rate will vary depending on environmental conditions. The spray bar will be used continuously during operation.

WV Dept. of Environmental Protection – Div. of Air Quality

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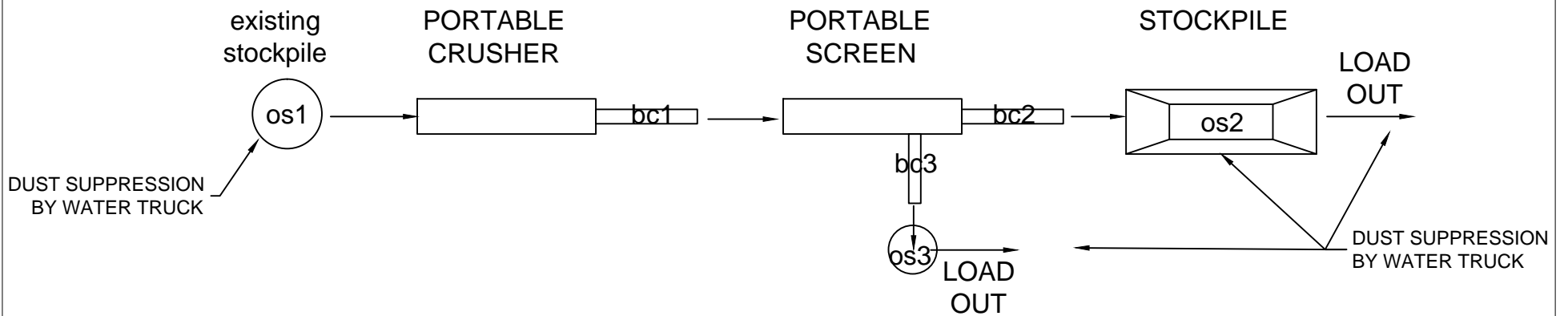
Prepared For:
Tunnel Ridge, LLC
2596 Battle Run Road
Triadelphia, WV 26059



ATTACHMENT D:
PROCESS FLOW DIAGRAM

ATTACHMENT D

METSO LT-106 TRACK JAW CRUSHER



TUNNEL RIDGE, LLC
PORTABLE CRUSHER

WV Dept. of Environmental Protection – Div. of Air Quality

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ATTACHMENT F:
AREA MAP



Possible Portable Crusher Unit Locations



File: 2016-421:02
Date Prepared: December 21, 2016



68011 VINEYARD ROAD
ST. CLAIRSVILLE, OH 43950
(740) 695-6100

Location Map
TUNNEL RIDGE, LLC
AIR PERMIT

SHEET

ATTACHMENT-F

PREPARED FOR:

TUNNEL RIDGE, LLC
2596 BATTLE RUN ROAD
TRIADELPHIA, WEST VIRGINIA 26059

WV Dept. of Environmental Protection – Div. of Air Quality

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Prepared For:
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ATTACHMENT G:
Affected Source Sheets

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number ¹		CR-1	SC-1			
Type of Crusher or Screen ²		JC	DD			
Make, Model No., Serial No. ³		Metso LT106	Terex 883			
Date of Construction, Reconstruction, or Modification (Month/Year) ⁴		05/2008	09/2015			
Maximum Throughput ⁵	tons/hour	300	110			
	tons/year	1,315,000	1,315,000			
Material sized from/to: ⁶		+24"/-3"	N/A			
Average Moisture Content (%) ⁷		2	2			
Control Device ID Number ⁸		CS-FW	CS-FE			
Baghouse Stack Parameters ⁹	height (ft)	N/A				
	diameter (ft)	N/A				
	volume (ACFM)	N/A				
	exit temp (F)	N/A				
	UTM Coordinates	N/A				
Maximum Operating Schedule ¹⁰	hours/day	8	8			
	days/year	250	250			
	hours/year	2,000	2,000			

1. Enter the appropriate Source Identification Number for each crusher and screen. For example, in the case of an operation which incorporates multiple crushers, the crushers should be designated CR-1, CR-2, CR-3 etc. beginning with the breaker or primary crusher. Multiple screens should be designated S-1, S-2, S-3 etc.
2. Describe types of crushers and screens using the following codes:

HM	Hammermill	SS	Stationary Screen	DR	Double Roll Crusher
SD	Single Deck Screen	BM	Ball Mill	DD	Double-Deck Screen
RB	Rotary Breaker	TD	Triple Deck Screen	JC	Jaw Crusher
GC	Gyratory Crusher	OT	Other		
3. Enter the make, model number, and serial number of the crusher/screen.
4. Enter the date that each crusher and screen was constructed, reconstructed, or modified.
5. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
6. Describe the nominal material size reduction (e.g. +2"/-3/8").
7. Enter the average percent moisture content of the material processed.
8. Enter the appropriate Control Device Identification Number for each crusher and screen. Refer to Table A – *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.
9. Enter the appropriate stack parameters if a baghouse control device is used.
10. Enter the maximum operating schedule for each crusher and screen in hours per day, days per year and hours per year.

CONVEYING AFFECTED SOURCE SHEET

Source Identification Number ¹	Date of Construction, Reconstruction, or Modification (Month/Year) ²	Type of Material Handled ³	Size of Material Handled ⁴	Maximum Material Transfer Rate ⁵		Average Moisture Content (%) ⁶	Control Device ⁷
				tons/hour	tons/year		
BC-1	05/2008	SM	~3"	300	75,000	2	N
BC-2	09/2015	SM	~3"	200	50,000	2	N
BC-3	09/2015	SM	~3"	300	75,000	2	N

1. Enter the appropriate Source Identification Number for each conveyor using the following codes. For example, multiple belt conveyors should be designated BC-1, BC-2, BC-3 etc. Transfer points are considered emission points, not sources, and should not be included in the *Conveying Affected Source Sheet*. Transfer Point Identification Numbers shall be assigned in the *Emission Calculation Sheet*.

BC	Belt Conveyor	BE	Bucket Elevator	DL	Drag-link Conveyor
PS	Pneumatic System	SC	Screw Conveyor	VC	Vibrating Conveyor
OT	Other				
2. Enter the date that each crusher and screen was constructed, reconstructed, or modified.
3. Enter the type of material being handled - Raw Material (RM) Sized Material (SM) Refuse (R) Other (O)
4. Enter the nominal size of the material being conveyed (e.g. sized material- ¾" x 0). If more than one material is handled by the listed conveyor, list each material and enter the appropriate data for each material.
5. Enter the maximum material transfer rate for each conveyor in tons per hour and tons per year.
6. Enter the average percent moisture content of the conveyed material.
7. Enter the control device for the conveyor. PE - Partial Enclosure (example ¾ hoop), FE - Full Enclosure, N – None

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number ¹	OS-1	OS-2	OS-3			
Type of Material Stored ²	RM	SM	SM			
Average Moisture Content (%) ³	2	2	2			
Maximum Yearly Storage Throughput (tons) ⁴	75,000	75,000	50,000			
Maximum Storage Capacity (tons) ⁵	3,000	3,000	2,000			
Maximum Base Area (ft ²) ⁶	5,000	5,000	3,500			
Maximum Pile Height (ft) ⁷	25	25	25			
Method of Material Load-in ⁸		MC	MC			
Load-in Control Device Identification Number ⁹	N/A	MC	MC			
Storage Control Device Identification Number ⁹	SW-WS	SW-WS	SW-WS			
Method of Material Load-out ⁸						
Load-out Control Device Identification Number ⁹						

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes three storage bins, four open stockpiles and one storage building (full enclosure), the Source Identification Numbers should be BS-1, BS-2, and BS-3; OS-1, OS-2, OS-3, and OS-4; and SB-1, respectively.

BS Bin or Storage Silo (full enclosure)	E3 Enclosure (three sided enclosure)
OS Open Stockpile	SB Storage Building (full enclosure)
SF Stockpiles with wind fences	OT Other
2. Describe the type of material stored or stockpiled. (e.g. sized material, raw material, refuse, etc).
3. Enter the average percent moisture content of the stored material.
4. Enter the maximum yearly storage throughput for each storage activity.
5. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.)
6. For stockpiles, enter the maximum stockpile base area.
7. For stockpiles, enter the maximum stockpile height.
8. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

CS Clamshell	SS Stationary Conveyor/Stacker
FC Fixed Height Chute from Bins	ST Stacking Tube
FE Front Endloader	TC Telescoping Chute from Bins
MC Mobile Conveyor/Stacker	TD Truck Dump
UC Under-pile or Under-Bin Reclaim Conveyor	PC Pneumatic Conveyor/Stacker
RC Rake or Bucket Reclaim Conveyor	OT Other
9. Enter the appropriate Control Device Identification Number for each storage activity. Refer to Table A - *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.

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ATTACHMENT I:
EMMISSIONS CALCULATIONS

ENGINE DATA SHEET

Source Identification Number ¹		CR-1		SC-1			
Engine Manufacturer and Model		Caterpillar C9		Caterpillar C4.4			
Manufacturer's Rated bhp/rpm		300/2200		110/2200			
Source Status ²		NS		NS			
Date Installed/Modified/Removed (Month/Year) ³		05/2008		09/2015			
Engine Manufactured/Reconstruction Date ⁴		05/2008		09/2015			
Is this a Certified Stationary Compression Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No) ⁵		NO		NO			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No) ⁶		NO		NO			
Engine, Fuel and Combustion Data	Engine Type ⁷	LB4S		LB4S			
	APCD Type ⁸	A/F		A/F			
	Fuel Type ⁹	2FO		2FO			
	H ₂ S (gr/100 scf)	7.3 X 10 ⁻⁶		7.3 X 10 ⁻⁶			
	Operating bhp/rpm	300/2200		110/2200			
	BSFC (Btu/bhp-hr)	3299		6473			
	Fuel throughput (ft ³ /hr)	2.12		0.66			
	Fuel throughput (MMft ³ /yr)	.0186		.0012			
	Operation (hrs/yr)	2,000		2,000			
Reference ¹⁰	Potential Emissions ¹¹	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
CR-1	NO _x	9.30	27.16	3.41	9.96		
	CO	2.7	5.85	0.73	2.15		
	VOC	0.75	2.20	0.28	0.81		
	SO ₂	0.62	1.80	0.23	0.66		
	PM ₁₀	0.66	1.93	0.24	0.71		
	Formaldehyde	0.0011	0.0032	.00011	0.0032		

1. Enter the appropriate Source Identification Number for each reciprocating internal combustion compressor/generator engine located at the facility. Multiple compressor engines should be designated CE-1, CE-2, CE-3 etc. Emergency Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

Diesel Engine Emissions Calculation Sheet

Manufacturers Data:

Horsepower 300 hp
 Engine Speep 2200 rpm
 Fuel Consumption 0.366666667 lb/hp-hr

#2 Fuel Oil Data:

142,600 btu/gallon
 6.96 lb/gallon
 0.84 grams/cm³
 19,300 Btu/lb
 0.02 MMBtu/lb
 2 mg/kg Sulfur Content

Calculate fuel throughput in gallons/hr

$$\frac{0.366666667 \text{ gal}}{\text{hp-hr}} \times \frac{300 \text{ hp}}{6.96 \text{ lb}} = 15.80431$$

Calculate fuel throughput in lb/hr

$$\frac{.366667 \text{ lb}}{\text{hp-hr}} \times \frac{300 \text{ hp}}{1} = 110 \text{ lb/hr}$$

Calculate BSFC in Btu/bhp-hr

$$\frac{6.94 \text{ gallons}}{\text{hr}} \times \frac{142,600 \text{ Btu}}{1 \text{ gallon}} \times \frac{1}{300 \text{ hp}} = 3,299 \text{ Btu/hp-hr}$$

Calculate fuel througput in cubic feet/hr, given 6.96 lb/gal diesel fuel

$$\frac{0.36666 \text{ lb}}{\text{hp-hr}} \times \frac{1 \text{ gal}}{6.96 \text{ lb}} \times \frac{0.1337 \text{ cu. ft.}}{1 \text{ gal}} \times \frac{300 \text{ hp}}{1} = 2.12 \text{ cu. ft./hr}$$

Calculate fuel througput in million cubic feet/yr

$$\frac{2.12 \text{ cu. ft.}}{\text{hr}} \times \frac{2,000 \text{ hrs}}{\text{year}} \times \frac{1 \text{ MM cu. ft.}}{1,000,000 \text{ cu. ft.}} = 0.004 \text{ MM cu. ft./yr}$$

Calculate H2S (grains/100 cu ft.)

$$\frac{2 \text{ mg H2S}}{\text{kg Fuel}} \times \frac{0.0154 \text{ grains}}{1 \text{ mg H2S}} \times \frac{0.84 \text{ g}}{\text{cm}^3} \times \frac{1 \text{ kg}}{1000 \text{ g}} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times \frac{28,316.85 \text{ cm}^3}{1 \text{ cu. ft.}} \times \frac{100}{100} = 7.3 \times 10^{-6} \text{ grains/100 cu. ft.}$$

Emissions

Constituent	AP-42 Emissions Factor		
	(lb/hp-hr)	lb/hr	tpy
NOx	0.031	9.30	27.16
CO	0.00668	2.00	5.85
SOx	0.00205	0.62	1.80
PM-10	0.0022	0.66	1.93
CO2	1.15	345.00	1007.40
*TOC:			
<i>Exhaust</i>	0.00247	0.74	2.16
<i>Evaporative</i>	0.00	0.00	0.00
<i>Crankcase</i>	0.0000441	0.01	0.04
<i>Refueling</i>	0.00	0.00	0.00
Total TOC:		0.75	2.20

Emissions

Constituent	AP-42 Emissions Factor		
	(lb/MMBtu)	lb/hr	tpy
Benzene	0.000933	0.00087	0.00254
Ethylbenzene	*	*	*
Toluene	0.000409	0.00038	0.001113
Xylenes	0.000285	0.00027	0.000776
n-Hexane	*	*	*
Formaldehyde	0.00118	0.00110	0.003212

**Unable to locate emission factor*

**Use TOC for VOC*

Diesel Engine Emissions Calculation Sheet

Manufacturers Data:

Horsepower 110 hp
 Engine Speep 2200 rpm
 Fuel Consumption 0.315911498 lb/hp-hr

#2 Fuel Oil Data:

142,600 btu/gallon
 6.96 lb/gallon
 0.84 grams/cm³
 19,300 Btu/lb
 0.02 MMBtu/lb
 2 mg/kg Sulfur Content

Calculate fuel throughput in gallons/hr

$$\frac{0.315911498 \text{ lb} \times 1 \text{ gal}}{\text{hp-hr} \times 6.96 \text{ lb}} = \frac{110}{4.993}$$

Calculate fuel throughput in lb/hr

$$\frac{.3159115 \text{ lb} \times 110 \text{ hp}}{\text{hp-hr}} = 34.75 \text{ lb/hr}$$

Calculate BSFC in Btu/bhp-hr

$$\frac{4.993 \text{ gallons} \times 142,600 \text{ Btu}}{\text{hr} \times 1 \text{ gallon}} = \frac{6,472 \text{ Btu/hp-hr}}{110 \text{ hp}}$$

Calculate fuel througput in cubic feet/hr, given 6.96 lb/gal diesel fuel

$$\frac{0.3159115 \text{ lb} \times 1 \text{ gal}}{\text{hp-hr} \times 6.96 \text{ lb}} = \frac{0.1337 \text{ cu. ft.} \times 110 \text{ hp}}{1 \text{ gal}} = 0.6675 \text{ cu. ft./hr}$$

Calculate fuel througput in million cubic feet/yr

$$\frac{0.6675 \text{ cu. ft.} \times 2,000 \text{ hrs}}{\text{hr} \times \text{year}} = \frac{1 \text{ MM cu. ft.}}{1,000,000 \text{ cu. ft.}} = 0.0013 \text{ MM cu. ft./yr}$$

Calculate H2S (grains/100 cu ft.)

$$\frac{2 \text{ mg H2S}}{\text{kg Fuel}} \times \frac{0.0154 \text{ grains}}{1 \text{ mg H2S}} \times \frac{0.84 \text{ g}}{\text{cm}^3} \times \frac{1 \text{ kg}}{1000 \text{ g}} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times \frac{28,316.85 \text{ cm}^3}{1 \text{ cu. ft.}} = 7.3 \times 10^{-6} \text{ grains/100 cu. ft.}$$

Emissions

Constituent	AP-42 Emissions Factor		
	(lb/hp-hr)	lb/hr	tpy
NOx	0.031	3.41	9.96
CO	0.00668	0.73	2.15
SOx	0.00205	0.23	0.66
PM-10	0.0022	0.24	0.71
CO2	1.15	126.50	369.38
*TOC:			
<i>Exhaust</i>	0.00247	0.27	0.79
<i>Evaporative</i>	0.00	0.00	0.00
<i>Crankcase</i>	0.0000441	0.00	0.01
<i>Refueling</i>	0.00	0.00	0.00
Total TOC:		0.28	0.81

Emissions

Constituent	AP-42 Emissions Factor		
	(lb/MMBtu)	lb/hr	tpy
Benzene	0.000933	0.00087	0.00254
Ethylbenzene	*	*	*
Toluene	0.000409	0.00038	0.00113
Xylenes	0.000285	0.00027	0.000776
n-Hexane	*	*	*
Formaldehyde	0.00118	0.00110	0.003212

**Unable to locate emission factor*

**Use TOC for VOC*

Potential to Emit

Portable Crusher

Source: USEPA Compilation of Air Pollutant Emission Factors - AP42 January, 1995
Section 13.2.4 Aggregate handling and Storage Piles

1. Particulate Emission Factors from batch or continuous drop operations

$$E = k(0.0032) \times [u/5]^{1.3} / [M/2]^{1.4}$$

Where: E = Emission Factor in pounds/ton coal
k = particle size (dimensionless)
u = annual mean wind speed (miles/hour)
M = material moisture content (%)

k = 0.74 for TSP
k = 0.35 for PM10
u = 9 mph (per MDE recommendation)
M = 2 % moisture (worst case scenario)

	Emission Factors	
	TSP	PM10
Transfers	0.00508	0.00240 pound/ton
Crushing	0.00540	0.00240 pound/ton

Source: USEPA Compilation of Air Pollutant Emissions Factors - AP42
Section 11.19.2.2 (SCC 3-05-020-02,03)

Annual Emissions due to use of portable screen

Notes and Assumptions:

Design Limit: 200 TPH
Calculated: 400,000 TPY
Operational: 8 Hr/Day
Assumptions: 250 Days/Yr

tpy = tons per year

Calculations done by multiplying appropriate emission factor by throughput tonnage.

And multiplying that number by the control efficiency for its respective transfer.

When calculating tons per year emissions, the product of tons per year throughput and the emission factor was divided by 2,000 to convert from pounds per year to tons per year.

Assume all tons delivered to North Branch will now go through crusher.

Historic Middlings to North Branch 2005 - 337,498.84 tons 2006 - 290,835.37 2007 - 359,237.89

431,085 <-20% increase over highest of last 3 years.

Transfers	Control Device	Control Efficiency (%)	Throughput		TSP		PM10	
			tpy	tph	tpy	lb/hr	tpy	lb/hr
Endloader to Hopper	None	0	400,000	200	1.0	1.0	0.5	0.5
Hopper to Belt 1	None	0	400,000	200	1.0	1.0	0.5	0.5
Belt 1 to Crusher	Full Enclosure	70	400,000	200	0.3	0.3	0.1	0.1
Crusher to Belt 2	Full Enclosure	70	400,000	200	0.3	0.3	0.1	0.1
Belt 2 to Stockpile (1/2" x 0")	None	0	400,000	200	1.0	1.0	0.5	0.5
Total PTE:					3.7	3.7	1.7	1.7
Pounds per operating day:					29.3		13.9	

Screening	Control Device	Control Efficiency (%)	Throughput		TSP		PM10	
			tpy	tph	tpy	lb/hr	tpy	lb/hr
Portable Screen	Full Enclosure	70	400,000	200	0.3	0.3	0.1	0.1
Total PTE:					0.3	0.3	0.1	0.1
Pounds per operating day:					2.6		1.2	

Total PTE:	TSP		PM10	
	tpy	lb/hr	tpy	lb/hr
Total PTE:	4.0	4.0	1.9	1.9
Pounds per operating day:	31.9		15.0	

WV Dept. of Environmental Protection – Div. of Air Quality

GENERAL PERMIT G40-C PERMIT PACKAGE

Applicant – TUNNEL RIDGE, LLC

Location: 1901 Short Creek Road
Richland District
Ohio County, WV

ATTACHMENT J:
CLASS I LEGAL ADVERTISEMENT

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Tunnel Ridge, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a (General Permit Registration) for a Rock Crusher located on 1901 Short Creek Road, Wheeling, in Ohio County, West Virginia.

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

Nitrogen Oxides (NO_x) – 37.12 tpy
Carbon Monoxide (CO) – 8.0 tpy
Particulate Matter (PM) Uncontrolled – 4.0 tpy
Particulate Matter-10 (PM-10) Uncontrolled – 1.9 tpy

Startup of operation is planned to begin on or about the 20th day of February, 2017. 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 1227, during normal business hours.

Dated this the 20th day of January, 2017.

By: Tunnel Ridge, LLC
Evan Midler
Land Manager
2596 Battle Run Road
Triadelphia, WV 26059

WV Dept. of Environmental Protection – Div. of Air Quality

GENERAL PERMIT G40-C PERMIT PACKAGE

Applicant – TUNNEL RIDGE, LLC

Location: 1901 Short Creek Road
Richland District
Ohio County, WV

Prepared For:
Tunnel Ridge, LLC
2596 Battle Run Road
Triadelphia, WV 26059



ATTACHMENT L:
GENERAL PERMIT REGISTRATION APPLICATION FEE

The required application fee will be paid by credit card. The receipt from payment shall follow this application.