



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

NOV 25 2019

Mr. Lance Houston  
Owner  
Houston Excavating and Demolition  
5030 NW Waukomis Dr  
Northmoor, MO 64151

RE: New Source Review - Permit Number:  
Project Number: 2019-10-042; Installation Number: 095-0403

Dear Mr. Houston:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application is necessary for continued compliance. In addition, please note that Houston Excavating and Demolition cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission,

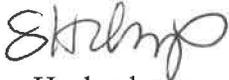
Mr. Lance Houston  
Page Two

whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).

If you have any questions regarding this permit, please do not hesitate to contact Chad Stephenson, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



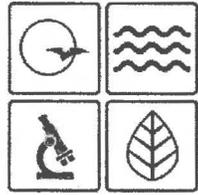
Susan Heckenkamp  
New Source Review Unit Chief

SH:sca

Enclosures

c: Kansas City Regional Office  
PAMS File: 2019-10-042

Permit Number: **112019-008**



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

**MISSOURI AIR CONSERVATION COMMISSION**

**PERMIT TO CONSTRUCT**

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **112019-008**

Project Number: 2019-10-042  
Installation ID: 095-0403

Parent Company: Houston Excavating and Demolition

Parent Company Address: 5030 NW Waukomis Dr, Northmoor, MO 64151

Installation Name: Houston Excavating and Demolition

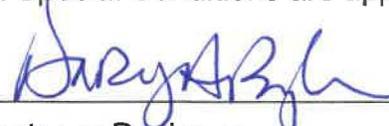
Installation Address: 2001 Blue Ridge Blvd, Independence, MO 64052

Location Information: Jackson County, S8 T49N R32W

Application for Authority to Construct was made for:  
New stationary rock crushing plant. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

  
\_\_\_\_\_  
Director or Designee  
Department of Natural Resources

**NOV 25 2019**

\_\_\_\_\_  
Effective Date

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:  
Missouri Department of Natural Resources  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102-0176  
(573) 751-4817

The regional office information can be found at the following website:  
<http://dnr.mo.gov/regions/>

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (3)(E). "Conditions required by permitting authority."*

1. Annual Emission Limit
  - A. Houston Excavating and Demolition shall emit less than 15.0 tons of PM<sub>10</sub> in any 12-month period from the entire installation which consists of the equipment listed in Table 01. The SSM emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions* shall be included in the limit.
  - B. Houston Excavating and Demolition shall demonstrate compliance with Special Condition 1.A. using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
2. Undocumented Watering Requirement  
Houston Excavating and Demolition shall apply a water spray on all haul roads and vehicular activity areas whenever conditions exist that would allow visible emissions from these sources to leave the property.
3. Primary Equipment Requirement  
Houston Excavating and Demolition shall process all rock through the primary crusher (EP-2). Bypassing the primary crusher is prohibited.
4. Record Keeping Requirement  
Houston Excavating and Demolition shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.
5. Reporting Requirement  
Houston Excavating and Demolition shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2019-10-042  
Installation ID Number: 095-0403

Permit Number: 112019-008

Houston Excavating and Demolition:  
2001 Blue Ridge Blvd  
Independence, MO 64052

Complete: October 29, 2019

Parent Company:  
Houston Excavating and Demolition  
5030 NW Waukomis Dr  
Northmoor, MO 64151

Jackson County, S8 T49N R32W

PROJECT DESCRIPTION

Houston Excavation will be using a Powerscreen Trakpactor 320SR Track Mounted crusher and screen (2013). It has a MHDR of 352 tph. It is a self-contained unit with a vibrating grizzly, impact crusher, a generator, a vibrating screen and associated conveyors. The plant is rated at 352 tph.

The engine that is used to provide power to the track mounted crusher serves a dual purpose by both propelling itself and providing power to the crusher, screen, and conveyors. Therefore it meets the definition of a nonroad engine as stated in 40 CFR 89.2 (1)(i) and the engine emissions were not included in the calculations.

The applicant is using undocumented watering to control emissions from haul roads and vehicular activity areas.

This installation is located in Jackson County, a maintenance area for ozone and an attainment area for all other criteria pollutants.

This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

No stationary permits have been issued to Houston Excavating from the Air Pollution Control Program. Houston Excavating previously operated PORT-0761 at this site.

## TABLES

**Table 1: Houston Excavating Equipment**

Emission No.	Equipment Description	MHDR
EP-1	Load-in/grizzly	352 tph
EP-2	Primary Crusher PowerScreen 320SR	352 tph
EP-3	Underconveyor from crusher	352 tph
EP-4	Powerscreen 320SR Screen	352 tph
EP-5	Underconveyor from screen	352 tph
EP-6 <sup>a</sup>	Side delivery conveyor	0 tph
EP-7 <sup>a</sup>	Cross conveyor	0 tph
EP-8 <sup>a</sup>	Recirculating conveyor	0 tph
EP-9a	Storage pile load-in	352 tph
EP-9b	Storage pile load-out	352 tph
EP-9c	Vehicular Activity	5.33 VMT/hr
EP-9d	Wind Erosion	1 acre
EP-10	Haul road	0.80 VMT/hr

<sup>a</sup>EP-6, 7 and 8 are auxiliary conveyors and their emissions were calculated with a MHDR of 0 tph. EP-7 and EP-8 conveyors take product and return it to the crusher to be crushed again; EP-6 distributes fine material that falls through the grizzly and transferred to a storage pile. Worst case scenario is when all product goes through the crusher, screen, and underconveyors.

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. There are no existing actual or potential emissions since this a new plant. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with a voluntary annual PM<sub>10</sub> de minimis emission limit to avoid modeling requirements.

**Table 2: Emissions Summary (tons per year)**

Air Pollutant	De Minimis Level/SMAL	<sup>a</sup> Potential Emissions from Process Equipment	<sup>b</sup> Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	56.12	270.92	42.01
PM <sub>10</sub>	15.0	20.51	96.73	<15.0
PM <sub>2.5</sub>	10.0	2.55	12.79	1.98
SO <sub>x</sub>	40.0	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

<sup>a</sup>Excludes haul road and storage pile emissions

<sup>b</sup>Includes haul road and storage pile emissions

## EMISSIONS CALCULATIONS

Emissions for the project were calculated as described below and using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment:

- Calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004.
- The uncontrolled emission factors were used because the inherent moisture content is less than 1.5% by weight.

Emissions from haul roads and vehicular activity areas:

- Calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006.

Emissions from storage piles:

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006.
- The moisture content of the aggregate is 0.7% by weight.
- Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are above/ conditioned to de minimis levels. Potential emissions of PM are above de minimis levels, but below major levels.

## APPLICABLE REQUIREMENTS

Houston Excavating and Demolition shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.

- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

#### SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) apply to the proposed equipment.

#### STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 25, 2019, received October 25, 2019, designating Houston Excavating and Demolition as the owner and operator of the installation.



## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>MMBtu</b> .....	Million British thermal units
<b>°F</b> .....	degrees Fahrenheit	<b>MMCF</b> .....	million cubic feet
<b>acfm</b> .....	actual cubic feet per minute	<b>MSDS</b> .....	Material Safety Data Sheet
<b>BACT</b> .....	Best Available Control Technology	<b>NAAQS</b> ....	National Ambient Air Quality Standards
<b>BMPs</b> .....	Best Management Practices	<b>NESHAPs</b> ..	National Emissions Standards for Hazardous Air Pollutants
<b>Btu</b> .....	British thermal unit	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>NSPS</b> .....	New Source Performance Standards
<b>CAS</b> .....	Chemical Abstracts Service	<b>NSR</b> .....	New Source Review
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>PM</b> .....	particulate matter
<b>CFR</b> .....	Code of Federal Regulations	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>CO</b> .....	carbon monoxide	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>ppm</b> .....	parts per million
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>PSD</b>	Prevention of Significant Deterioration
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PTE</b> .....	potential to emit
<b>CSR</b> .....	Code of State Regulations	<b>RACT</b> .....	Reasonable Available Control Technology
<b>dscf</b> .....	dry standard cubic feet	<b>RAL</b> .....	Risk Assessment Level
<b>EIQ</b> .....	Emission Inventory Questionnaire	<b>SCC</b> .....	Source Classification Code
<b>EP</b> .....	Emission Point	<b>scfm</b> .....	standard cubic feet per minute
<b>EPA</b> .....	Environmental Protection Agency	<b>SDS</b> .....	Safety Data Sheet
<b>EU</b> .....	Emission Unit	<b>SIC</b> .....	Standard Industrial Classification
<b>fps</b> .....	feet per second	<b>SIP</b> .....	State Implementation Plan
<b>ft</b> .....	feet	<b>SMAL</b> .....	Screening Model Action Levels
<b>GACT</b> .....	Generally Available Control Technology	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>GHG</b> .....	Greenhouse Gas	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>gpm</b> .....	gallons per minute	<b>SSM</b> .....	startup, shutdown, & malfunction
<b>gr</b> .....	grains	<b>tph</b> .....	tons per hour
<b>GWP</b> .....	Global Warming Potential	<b>tpy</b> .....	tons per year
<b>HAP</b> .....	Hazardous Air Pollutant	<b>VMT</b> .....	vehicle miles traveled
<b>hr</b> .....	hour	<b>VOC</b> .....	Volatile Organic Compound
<b>hp</b> .....	horsepower		
<b>lb</b> .....	pound		
<b>lbs/hr</b> .....	pounds per hour		
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		
<b>m/s</b> .....	meters per second		
<b>Mgal</b> .....	1,000 gallons		
<b>MW</b> .....	megawatt		
<b>MHDR</b> .....	maximum hourly design rate		