



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: **022015-012**

Project Number: 2014-11-059

Installation ID: 183-0260

Parent Company: Independence Excavating, Inc.

Parent Company Address: 5720 Schaaf Road, Independence, OH 44131

Installation Name: Independence Excavating, Inc.

Installation Address: 2000 South River Road, St. Charles, MO 63303

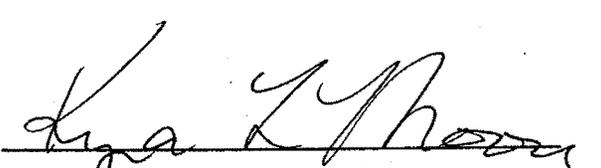
Location Information: St. Charles County, S8 T46N R4 & 5E

Application for Authority to Construct was made for:
Installation of a new rock crushing facility. This review was conducted in accordance with Section (6), 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.

FEB 25 2015

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

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 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 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 of Natural Resources' 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 this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' 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 at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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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 (12)(A)10. "Conditions required by permitting authority."

1. **Best Management Practices Requirement**
Independence Excavating, Inc. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
2. **Ambient Air Impact Limitation**
 - A. Independence Excavating, Inc. shall not cause an exceedance of the NAAQS for PM₁₀ of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Independence Excavating, Inc. shall demonstrate compliance with Special Condition 2.A using Attachment A or other equivalent forms that have been approved by the Air Pollution Control Program, including electronic forms.
3. **Annual Emission Limit**
 - A. Independence Excavating, Inc. shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the entire installation.
 - B. Independence Excavating, Inc. shall demonstrate compliance with Special Condition 3.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
4. **Wet Suppression Control System Requirement**
 - A. Independence Excavating, Inc. shall install and operate wet spray devices on all crushers and screens.
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Independence Excavating, Inc. shall adjust the production rate to control emissions from these units. Independence Excavating, Inc. shall record a brief description of such events.
5. **Minimum Distance to Property Boundary Requirement**
The primary emission point shall be located at least 400 feet from the nearest property boundary.

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SPECIAL CONDITIONS:

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

6. **Concurrent Operation Restriction**
Independence Excavating, Inc. is prohibited from operating whenever other plants are located at the site.
7. **Primary Equipment Requirement**
Independence Excavating, Inc. shall process all rock through the primary crusher (EP-3). Bypassing the primary crusher is prohibited.
8. **Nonroad Engines Requirement**
Independence Excavating, Inc.'s engines shall not remain at one location within this site longer than 12 consecutive months in order for the engines to meet the definition of a nonroad engine as stated in 40 CFR 89.2. These engines shall be moved with its associated equipment at least once every 12 consecutive months at this site.
9. **Record Keeping Requirement**
Independence Excavating, Inc. 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.
10. **Reporting Requirement**
Independence Excavating, Inc. shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, 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 (6) REVIEW

Project Number: 2014-11-059
Installation ID Number: 183-0260
Permit Number:

Independence Excavating, Inc.
2000 South River Road
St. Charles, MO 63303

Complete: December 15, 2014

Parent Company:
Independence Excavating, Inc.
5720 Schaaf Road
Independence, OH 44131

St. Charles County, S8 T46N R4 & 5E

PROJECT DESCRIPTION

Independence Excavating, Inc. is relocating their rock crushing operation to property/quarry owned by Lafarge in St. Charles County. Lafarge has Construction Permit #082005-020 for this site but will not be in operation while Independence Excavation, Inc. is there. There have also been numerous relocations of portable plants to that site. Independence Excavating, Inc. will be the sole occupant of this quarry, therefore no concurrent operations will exist.

The plant will consist of a grizzly, jaw crusher, impact crusher, cone crusher, primary and secondary screens, and 11 conveyors. The MHDR of the equipment is 400 tons per hour (tph). The primary crusher (EP-03) will be located 400 feet from the nearest property line. The plant will be powered by two diesel generators. These engines will operate at the Lafarge Quarry only 10 months of the year and then returned back to Ohio during the winter months. The diesel engines meet the definition of non-road engine as defined in 40 CFR 89.2 (1)(i). Therefore, the emissions of the engine were not included. The crusher is track mounted but is not permitted as a portable plant since it will be at the Lafarge Quarry longer than 24 months.

Water spray devices will be located on the inlet and outlet of each of the three crushers to control particulate emissions. Water spray carryover will control particulate emissions coming from the conveyors and screens.

The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

This installation is located in St. Charles County, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants.

This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

No permits have been issued to Independence Excavating, Inc. from the Air Pollution Control Program.

Table 1: Independence Excavating, Inc. Equipment List

Emission Unit	Description of Unit	MHDR (tph)	Control Type
EP1	Truck Unloading	400	Water spray Device
EP2	Grizzly	400	Water Spray Device
EP3	Primary Crusher-Jaw/Pioneer Model 2854 (1985).	400	Water Spray Device
EP4	Secondary Crusher-Impact/Pioneer Model 2854 (1985)	400	Water Spray Device
EP5	Primary Screen/JCI Model 6203	400	Water Spray Carryover
EP6	Tertiary Crusher-Cone/Cedarapis Model MVP 450	400	Water Spray Carryover
EP7	Secondary Screen/Deister Model 2463	400	Water Spray Carryover
EP8	Conveyors (11)	4400	Water Spray Carryover
Non-Road	Engine/Catepillar Model 3508 (1996)	1244 Hp	Water Spray Carryover
Non-Road	Engine/Catepillar Model APS 800 (2006)	1210 Hp	Water Spray Device
EP9a	Stockpile Load in	400	
EP9b	Stockpile Load our	400	
EP9c	Stockpile Vehicular Activity	1.52 VMT	BMPs
EP9d	Stockpile Wind Erosion	0.72 Acres	
EP10	Haul Road Pit	6.31 VMT	BMPs
EP11	Haul Road Shipping	15.46 VMT	BMPS

TABLES

The table below summarizes the emissions of this project. The potential emissions of the process equipment exclude emissions from haul roads and wind erosion. There are no existing actual emissions because this is a new operation. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual emission limit.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Potential Emissions Of Process Equipment (tons/yr)	Existing Actual Emissions	^a Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	19.17	N/A	184.41	37.40
PM ₁₀	15.0	8.88	N/A	73.95	<15.0
PM _{2.5}	10.0	0.68	N/A	20.75	4.21
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
GHG (CO ₂ e)	75,000 / 100,000	N/A	N/A	N/A	N/A
GHG (mass)	0.0 / 100.0 / 250.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable

^aIncludes site specific haul road and storage pile emissions

Table 3 summarizes the ambient air quality impact analysis. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously. The 24-hour limited impacts and daily limit are based on compliance with the NAAQS for PM₁₀.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	NAAQS/ RAL (µg/m ³)	Averaging Time	^a Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^b Daily Limit (tons/day)
^c PM ₁₀ (solitary)	150.0	24-hour	188.38	130.0	20.0	7,183.0

^aModeled impact at maximum capacity with controls

^bIndirect limit based on compliance with NAAQS.

^cSolitary operation

EMISSIONS CALCULATIONS

Emissions for the project were calculated 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 were calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. The controlled emission factors were used because the equipment is control by water spray devices.

The engines emissions were not evaluated for this review as the diesel engines at this site are classified as nonroad engines. 40 CFR 63 Subpart ZZZZ, "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and 40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" do not apply. However, if the engines were to remain in one location for longer than 12 consecutive months, it would not be in compliance with this permit because engine emissions were not evaluated. It may also not be in compliance with MACT ZZZZ or NSPS IIII. The nonroad engines are subject to further applicable requirements in 40 CFR 89 and 40 CFR 1039 which are outside the purview of this program.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} were applied to the emission calculations for the use of BMPs. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. 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."

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 3. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software AERSCREEN. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the NAAQS or RAL for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant's production is limited to ensure compliance with the standard.

This plant uses BMPs to control emissions from haul roads and vehicular activity areas, so emissions from these sources were not included in the AAQIA. Instead they were addressed as a background concentration of 20 µg/m³ of PM₁₀ in accordance with the Air Pollution Control Program's BMPs interim policy.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below de minimis and no refined modeling is required. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

APPLICABLE REQUIREMENTS

Independence Excavating, Inc. 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. This installation is required to submit a partial EIQ for the 2015 calendar year and full EIQ for the 2016 calendar year.
- A Basic Operating Permit application is required for this installation within 30 days of commencement of operations.
- *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

- 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 (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathy Kolb
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 14, 2014, received November 24, 2014, designating Independence Excavating, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.

1. Pavement
 - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
 - B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants
 - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.

3. Application of Water-Documented Daily
 - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - C. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
 - E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

APPENDIX A

Abbreviations and Acronyms

%percent	MMBtu Million British thermal units
°Fdegrees Fahrenheit	MMCF million cubic feet
acfmactual cubic feet per minute	MSDS Material Safety Data Sheet
BACTBest Available Control Technology	NAAQS ... National Ambient Air Quality Standards
BMPs Best Management Practices	NESHAPs ..National Emissions Standards for Hazardous Air Pollutants
Btu British thermal unit	NO_x nitrogen oxides
CAM Compliance Assurance Monitoring	NSPS New Source Performance Standards
CAS Chemical Abstracts Service	NSR New Source Review
CEMS Continuous Emission Monitor System	PM particulate matter
CFR Code of Federal Regulations	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
COcarbon monoxide	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
CO₂carbon dioxide	ppm parts per million
CO_{2e}carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMS Continuous Opacity Monitoring System	PTE potential to emit
CSR Code of State Regulations	RACT Reasonable Available Control Technology
dscfdry standard cubic feet	RAL Risk Assessment Level
EQ Emission Inventory Questionnaire	SCC Source Classification Code
EP Emission Point	scfm standard cubic feet per minute
EPA Environmental Protection Agency	SDS Safety Data Sheet
EU Emission Unit	SIC Standard Industrial Classification
fpsfeet per second	SIP State Implementation Plan
ft feet	SMAL Screening Model Action Levels
GACT Generally Available Control Technology	SO_x sulfur oxides
GHG Greenhouse Gas	SO₂ sulfur dioxide
gpm gallons per minute	tph tons per hour
gr grains	tpy tons per year
GWP Global Warming Potential	VMT vehicle miles traveled
HAP Hazardous Air Pollutant	VOC Volatile Organic Compound
hr hour	
hp horsepower	
lbpound	
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	
Mgal 1,000 gallons	
MWmegawatt	
MHDR maximum hourly design rate	

Mr. Scott Schroeder
Senior Project Engineer
Independence Excavating, Inc.
5720 Schaaf Road
Independence, OH 44131

RE: New Source Review Permit - Project Number: 2014-11-059

Dear Mr. Schroeder:

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, your new source review permit application is necessary for continued compliance. 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.

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, whose contact information is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions, please do not hesitate to contact Kathy Kolb, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:shl

Enclosures

c: St. Louis Regional Office
PAMS File: 2014-11-059
Permit Number: