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: 052018-005

Project Number: 2018-03-026
Installation ID: PORT-0769

Parent Company: Con-Agg Companies, L.L.C.

Parent Company Address: 2604 N. Stadium Blvd., Columbia, MO 65202

Installation Name: Con-Agg Companies, L.L.C. PORT-0769

Installation Address: 159 Osage Quarry Lane, Westphalia, MO 65085

Location Information: Osage County, S8 T42N R9W

Application for Authority to Construct was made for:
Construction of a new portable rock crusher. 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.

Prepared by
Chad Stephenson
New Source Review Unit

Director or Designee
Department of Natural Resources

MAY 21 2018
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 sources(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 sources(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/

GENERAL 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. Equipment Identification Requirement
   Con-Agg Companies, L.L.C. PORT-0769 shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component.

2. Relocation of Portable Rock Crushing Plant
   A. Con-Agg Companies, L.L.C. PORT-0769 shall not be operated at any location longer than 24 consecutive months.

   B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
      1) If the portable rock crushing plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
      2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed, then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.

3. Record Keeping Requirement
   Con-Agg Companies, L.L.C. PORT-0769 shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

4. Reporting Requirement
   Con-Agg Companies, L.L.C. PORT-0769 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.

SITE SPECIFIC 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."

PORT ID Number: PORT-0769
Site Name: Westphalia
Site Address: 159 Osage Quarry Lane, Westphalia, MO 65085
Site County: Osage S8 T42N R9W

1. Undocumented Watering Requirement
   Con-Agg Companies, L.L.C. PORT-0769 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.

2. Annual Emission Limit
   A. Con-Agg Companies, L.L.C. PORT-0769 shall emit less than 15.0 tons of PM_{10} in any 12-month period from the entire installation which consists of the equipment listed in Table 1. 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. Con-Agg Companies, L.L.C. PORT-0769 shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

3. Primary Equipment Requirement
   Con-Agg Companies, L.L.C. PORT-0769 shall process all rock through the impact crusher (EP-02). Bypassing the crusher is prohibited.

4. Moisture Content Testing Requirement
   A. Con-Agg Companies, L.L.C. PORT-0769 shall verify through testing that the moisture content of the processed rock is greater than or equal to 1.5 percent by weight.

   B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials D-2216, C-566 or another method approved by the Director.

SITE SPECIFIC SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.

D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. each quarry).

E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Con-Agg Companies, L.L.C. PORT-0769 main office within 30 days of completion of the required test.

F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 4.A, another test may be performed with 15 days of the noncompliant test. If the results of that test also exceed the limit, Con-Agg Companies, L.L.C. PORT-0769 shall either:
   1.) Apply for a new permit to account for the revised information, or
   2.) Submit a plan for the installation of wet spray devices to the Air Pollution Control Program Compliance Assistance section within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

5. Record Keeping Requirement
Con-Agg Companies, L.L.C. PORT-0769 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.

6. Reporting Requirement
Con-Agg Companies, L.L.C. PORT-0769 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, 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: 2018-03-026
Installation ID Number: PORT-0769
Permit Number: 052018-005

Con-Agg Companies, L.L.C. PORT-0769:
159 Osage Quarry Lane
Westphalia, MO 65085

Complete: March 27, 2018

Parent Company:
Con-Agg Companies, L.L.C.
2604 N. Stadium Blvd.
Columbia, MO 65202

Osage County, S8 T42N R9W

PROJECT DESCRIPTION

Con-Agg Companies, L.L.C. submitted an application for a KPI-JCI Track Mounted FT4250CC. The new plant consists of a grizzly feeder with a 6.5 cubic yard hopper connected to an Andreas HIS impact crusher that is capable of producing up to 400 tons per hour. The plant has four conveyors. There will be one primary screen. The equipment list for PORT-0769 can be found in Table 1.

The CAT engine that is used to provide power to the track mounted KPI-JCI 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 Osage County, an attainment area for all criteria pollutants.

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

No permits have been issued to Con-Agg Companies, L.L.C. PORT-0769 from the Air Pollution Control Program.

TABLES

Table 1: PORT-0769 Equipment

Emission No.	Equipment Description	MHDR
EP-1	Load-in/grizzly	400 tph
EP-2	Andreas HSI Impact Crusher	400 tph
EP-3	Conveyors (4)	1600 tph
EP-4	Screen	400 tph
EP-5a	Storage pile load-in	400 tph
EP-5b	Storage pile load-out	400 tph
EP-5c	Vehicular Activity	2.53 VMT/hr
EP-5d	Wind Erosion	2 acres
EP-6	Haul road Crushed Rock to Stockpiles	4.09 VMT/hr
EP-7	Customer haul road	7.12 VMT/hr

Table 2 below summarizes the emissions of this project. The potential emissions of the process equipment, which exclude emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. There are no existing actual emissions because this is a new portable plant. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). Conditioned potential emissions account for the voluntary PM_{10} annual emission limit.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	[a]Potential Emissions from Process Equipment	Existing Actual Emissions	[b]Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	6.94	N/A	354.84	48.18
PM_{10}	15.0	2.56	N/A	110.47	<15.0
$PM_{2.5}$	10.0	0.35	N/A	13.59	1.84
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_2e)	N/A	N/A	N/A	N/A	N/A
GHG (mass)	N/A	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable
[a]Excludes site specific haul road and storage pile emissions
[b]Includes site specific 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 controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5 % by weight.

Emissions from aggregate handling:

- 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 inherent moisture content of the crushed rock is greater 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.
- A 50% control efficiency for PM and PM_{10} and a 41% control efficiency for $PM_{2.5}$ were applied to the emission calculations for the use of undocumented watering on haul roads and vehicular activity.

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.
- The moisture content of the aggregate is greater than 1.5% 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 (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM_{10} emission limit of 15.0 tons per year for stationary plants in order to avoid refined modeling required by 10 CSR 10-6.060 (6)(B)3. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

APPLICABLE REQUIREMENTS

Con-Agg Companies, L.L.C. PORT-0769 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.
- Operating Permit is not needed because this is a portable plant.
- *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"
- 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*, 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 March 12, 2018, received March 13, 2018, designating Con-Agg Companies, L.L.C. as the owner and operator of the installation.

Attachment A: PM_{10} 12-Month Rolling Total Emissions Tracking Sheet

Con-Agg Companies, L.L.C. PORT-0769

Project Number: 2018-03-026

Site Name:

Permit Number: 052018-005

This sheet covers the period from ____________ to ____________ (Copy as needed)

(Month, Day Year) (Month, Day Year)

Month	Production (tons)	PM_{10} Composite Emission Factor (lb/ton)	Monthly PM_{10} Emissions[1] (lbs)	Startup, Shutdown and Malfunction PM_{10} Emissions[2] (lbs)	Monthly PM_{10} Emissions[3] (tons)	12-Month Rolling Total Emissions[4] (tons)
Example	*50,000*	*0.0631*	*3,155*	*0.0*	*1.58*	*1.58+11 previous months*
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				
		0.0631				

[1]Multiply the monthly production by the PM_{10} composite emission factor.

[2]As reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10 CSR 10-6.050 for the month.

[3]Add the monthly PM_{10} emissions plus the SSM emissions from the same time period and divide by 2000 and

[4]Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 15.0 tons of PM_{10} per consecutive 12 months is necessary for compliance.

APPENDIX A

Abbreviations and Acronyms

% ..... percent
°F ..... degrees Fahrenheit
acfm ..... actual cubic feet per minute
BACT ..... Best Available Control Technology
BMPs ..... Best Management Practices
Btu ..... British thermal unit
CAM ..... Compliance Assurance Monitoring
CAS ..... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR ..... Code of Federal Regulations
CO ..... carbon monoxide
CO_2 ..... carbon dioxide
CO_2e ..... carbon dioxide equivalent
COMS ..... Continuous Opacity Monitoring System
CSR ..... Code of State Regulations
dscf ..... dry standard cubic feet
EIQ ..... Emission Inventory Questionnaire
EP ..... Emission Point
EPA ..... Environmental Protection Agency
EU ..... Emission Unit
fps ..... feet per second
ft ..... feet
GACT ..... Generally Available Control Technology
GHG ..... Greenhouse Gas
gpm ..... gallons per minute
gr ..... grains
GWP ..... Global Warming Potential
HAP ..... Hazardous Air Pollutant
hr ..... hour
hp ..... horsepower
lb ..... pound
lbs/hr ..... pounds per hour
MACT ..... Maximum Achievable Control Technology
µg/m^3 ..... micrograms per cubic meter
m/s ..... meters per second
Mgal ..... 1,000 gallons
MW ..... megawatt
MHDR ..... maximum hourly design rate
MMBtu ..... Million British thermal units
MMCF ..... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS ..... National Ambient Air Quality Standards
NESHAPs ..... National Emissions Standards for Hazardous Air Pollutants
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standards
NSR ..... New Source Review
PM ..... particulate matter
$PM_{2.5}$ ..... particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10} ..... particulate matter less than 10 microns in aerodynamic diameter
ppm ..... parts per million
PSD Prevention of Significant Deterioration
PTE ..... potential to emit
RACT ..... Reasonable Available Control Technology
RAL ..... Risk Assessment Level
SCC ..... Source Classification Code
scfm ..... standard cubic feet per minute
SDS ..... Safety Data Sheet
SIC ..... Standard Industrial Classification
SIP ..... State Implementation Plan
SMAL ..... Screening Model Action Levels
SO_x ..... sulfur oxides
SO_2 ..... sulfur dioxide
SSM ..... startup, shutdown, & malfunction
tph ..... tons per hour
tpy ..... tons per year
VMT ..... vehicle miles traveled
VOC ..... Volatile Organic Compound

For Single Plant Operation

Hours per day	24.0
Days per year	49.6
Hours per year	1189.4

For Multiple Plant Operation

Hours per day	24.0
Days per year	49.6
Hours per year	1189.4

Pollutant	Justification for Limit
PM10	De Minimis

Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions including fugitives (tons/yr)	Allowable Emissions for 1189 hours per year (tons/yr)	Deminimis Thresholds	Plant-wide Composite Emission Factor (lb/ton)	Limit Hours per Year / Limit Hours per Year w/ 24 hr day
PM	6.94	354.84	48.18	25	0.2025	
PM_{10}	2.56	110.47	15.00	15	0.0631	
$PM_{2.5}$	0.35	13.59	1.84	10	0.0078	
SO_2	-	-	-	40	0.0000	
NO_2	-	-	-	40	0.0000	
VOC	-	-	-	40	0.0000	
CO	-	-	-	100	0.0000	
CH_2O	-	-	-	2.00	0.0000	
Pb	-	-	-	0.01	0.0000	
HAPs	-	-	-	10	0.0000	
CO_2	-	-	-	100	0.0000	
N_2O	-	-	-	100	0.0000	
CH_4	-	-	-	100	0.0000	
GHG_{mass}	-	-	-	100	0.0000	
CO_2eq	-	-	-	100,000	0.0000	

Maximum hourly design rate (tons/hr)	400

Tons of product per day	9,600.0
Tons of product per year	475,765.1

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)	Pollutant	Emission Factor	Emission Factor (lbs/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
		EngSet #1			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			N/A	N/A	SO_2		Gallon			
								N/A	N/A	NO_2		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		EngSet #2			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			N/A	N/A	SO_2		Gallon			
								N/A	N/A	NO_2		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		EngSet #3			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			N/A	N/A	SO_2		Gallon			
								N/A	N/A	NO_2		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		Pile #1													
		Load in		400.00	tons per hour			N/A	N/A	PM	0.0087	ton	3.49E+00	15.28	2.07
								N/A	N/A	PM_{10}	0.0041	ton	1.65E+00	7.23	0.98
								N/A	N/A	$PM_{2.5}$	0.0006	ton	2.50E-01	1.09	0.15
		Load out		400.00	tons per hour			N/A	N/A	PM	0.0087	ton	3.49E+00	15.28	2.07
								N/A	N/A	PM_{10}	0.0041	ton	1.65E+00	7.23	0.98
								N/A	N/A	$PM_{2.5}$	0.0006	ton	2.50E-01	1.09	0.15
		Vehicular Activity		2.53	VMT per hour		Unpaved, Watering	N/A	50%	PM	9.0866	VMT	1.15E+01	50.25	6.82
								N/A	50%	PM_{10}	2.5840	VMT	3.26E+00	14.29	1.94
								N/A	41%	$PM_{2.5}$	0.2584	VMT	3.84E-01	1.68	0.23
		Wind Erosion		2.00	acres			N/A	N/A	PM	0.1783	acre-hr	3.57E-01	1.56	0.21
								N/A	N/A	PM_{10}	0.0892	acre-hr	1.78E-01	0.78	0.11
								N/A	N/A	$PM_{2.5}$	0.0134	acre-hr	2.67E-02	0.12	0.02
		Pile #2													
		Load in			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM_{10}		acre-hr			
								N/A	N/A	$PM_{2.5}$		acre-hr			
		Pile #3													
		Load in			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM_{10}		acre-hr			
								N/A	N/A	$PM_{2.5}$		acre-hr			
		Pile #4													
		Load in			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM_{10}		ton			
								N/A	N/A	$PM_{2.5}$		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM_{10}		acre-hr			
								N/A	N/A	$PM_{2.5}$		acre-hr			
		Road #1		4.09	VMT per hour		Unpaved, Watering	N/A	50%	PM	13.0285	VMT	2.66E+01	116.72	15.85
								N/A	50%	PM_{10}	3.8455	VMT	7.87E+00	34.45	4.68
								N/A	41%	$PM_{2.5}$	0.3846	VMT	9.27E-01	4.06	0.55
		Road #2		7.12	VMT per hour		Unpaved, Watering	N/A	50%	PM	9.5374	VMT	3.40E+01	148.74	20.20

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)	Pollutant	Emission Factor	Emission Factor (lbs/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
								N/A	50%	PM_{10}	2.8151	VMT	1.00E+01	43.90	5.96
								N/A	41%	$PM_{2.5}$	0.2815	VMT	1.18E+00	5.17	0.70
		Road #3		7.12	VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #4			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #5			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #6			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			

Equipment	Unit ID	Description of Unit	Equipment Description/SCC	Heat Rate	UoM per hour						Emission Factor (lbs/UoM)			
		Combustion #1		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		mgal		
								100%	N/A	SO_2		mgal		
								100%	N/A	NO_x		mgal		
								100%	N/A	VOC		mgal		
								100%	N/A	CO		mgal		
								100%	N/A	CH_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		
		Combustion #2		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		mgal		
								100%	N/A	SO_2		mgal		
								100%	N/A	NO_x		mgal		
								100%	N/A	VOC		mgal		
								100%	N/A	CO		mgal		
								100%	N/A	CH_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		
		Combustion #3		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		mgal		
								100%	N/A	SO_2		mgal		
								100%	N/A	NO_x		mgal		
								100%	N/A	VOC		mgal		
								100%	N/A	CO		mgal		
								100%	N/A	CH_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	MHTP	Units	Equip Type	Control Type					Emission Factor (lbs/UoM)				
N	EP-01	loading into crusher/grizzly	Grizzly Feeder 30502031	400.00	Tons	Fugitive	Moisture => 1.5%	100%	0.00%	PM	0.000032	Tons	1.28E-02	5.61E-02	7.81E-03
						Fugitive		100%	0.00%	PM_{10}	0.000016	Tons	6.40E-03	2.80E-02	3.81E-03
						Fugitive		100%	0.00%	$PM_{2.5}$	0.000008	Tons	3.20E-03	1.40E-02	1.90E-03
N	EP-02	Impact Crusher	Crusher-Primary, (Diameter 3-12") 30502001	400.00	Tons	Process	Moisture => 1.5%	100%	77.78%	PM	0.0054	Tons	4.80E-01	2.10E+00	2.85E-01
						Process		100%	77.50%	PM_{10}	0.0024	Tons	2.16E-01	9.46E-01	1.28E-01
						Process		100%	77.50%	$PM_{2.5}$	0.000444444	Tons	4.00E-02	1.75E-01	2.38E-02
N	EP-03	4 conveyors	Conveyor 30502006	1600.00	Tons	Process	Moisture => 1.5%	100%	95.33%	PM	0.003	Tons	2.24E-01	9.81E-01	1.33E-01
						Process		100%	95.82%	PM_{10}	0.0011	Tons	7.36E-02	3.22E-01	4.36E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	2.08E-02	9.11E-02	1.24E-02
N	EP-04	1 Primary screening unit	Screens, (3/16" or Greater) 30502002	400.00	Tons	Process	Moisture => 1.5%	100%	91.20%	PM	0.025	Tons	8.80E-01	3.85E+00	5.23E-01
						Process		100%	91.49%	PM_{10}	0.0087	Tons	2.96E-01	1.30E+00	1.76E-01
						Process		100%	91.49%	$PM_{2.5}$	0.00587838	Tons	2.00E-02	8.76E-02	1.19E-02

General Plant Information

Primary Unit Size (tons per hour)	400

It is important that you read all the comments (cells marked with a red triangle in the upper right corner) because they may direct you to make changes to the data entry cells.

Emission Point Information

Emission Point	Stack Height (feet)	Stack Inside Diameter (feet)	Stack Gas Flow Rate (ACFM)	Stack Gas Exit Temp. (°F)

Storage Pile Information

Storage Pile ID No.	Pile #1	Pile #2	Pile #3	Pile #4
Maximum Area of Storage Pile (Acres)	2			
Type of Material Stored:	Crushed limestone			
Moisture Content %:	1.5			
Silt Content %:	1.6			
Method of Load In to Storage Pile	Truck			
Method of Load Out from Storage Pile	Loader			
Distance Loader Travels (feet)	100			
Unloaded Loader Weight (tons)	18.00			
Loaded Loader Weight (tons)	24.00			
Rate (tons/hour)	400.00			
max VMT per hour	2.5253			
Surface Treatment	Unpaved			
Vehicular Area Control	Watering			

Haul Road Information

Haul Road ID No.	Crushed Rock to Stockpiles	Customer Haul Road		Road #4	Road #5	Road #6
Length of Haul Road (feet) Enter the length of each roadway in feet. The plant layout diagram (drawn to scale) should document and support the value entered. *Note:* Twice this distance is used, one trip in and one out.	810	705				
Unloaded Truck Weight (tons)	20	10				
Loaded Truck Weight (tons)	50	25				
Rate Hauled (tons/hour)	400	400				
max VMT per hour	4.0909	7.1212				
Surface Treatment	Unpaved	Unpaved				
Haul Road Control	Watering	Watering				

Engine Set Information

	#1	#2	#3
Type of Fuel			
Brake Horsepower (bhp)			
Engine kilowatt rating (kW)			
gallons per hour			
Engine MHDR (mmBtu per hour, input)			
Is this a generator-set engine?			
Model Year (yyyy)			
Fuel Sulfur Content (% weight sulfur)			

Combustion Sources

Combustion ID - Description	Combustion #1		Combustion #2	Desc #2	Combustion #3	Desc #3
Heat Rate	mmBtu/hour			mmBtu/hour		mmBtu/hour
	mgal/hour			mgal/hour		mgal/hour
	mmscf/hour			mmscf/hour		mmscf/hour
	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 98	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 98	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 98
Fuel Type						
Fuel Sulfur Content (% weight sulfur, for oil; grains of sulfur/100 cuft gas vapor for Butane and Propane; not used for Natural gas)	% weight sulfur			% weight sulfur		% weight sulfur

Liquid Storage Tanks: Tank ID	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5	Tank #6
Annual VOC (pounds)						
Annual VOC (tons)						

Enter Emission Unit Information Below

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	Equip Type	Max Hourly Through/Put (MHTP)	MHTP Units	Control Type	"OOO" Applicable
N	EP-01	loading into crusher/grizzly	Grizzly Feeder 30502031	Fugitive	400.0000	Tons	Moisture => 1.5%	
N	EP-02	Impact Crusher	Crusher-Primary, (Diameter 3-12") 30502001	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-03	4 conveyors	Conveyor 30502006	Process	1600.0000	Tons	Moisture => 1.5%	
N	EP-04	1 Primary screening unit	Screens, (3/16" or Greater) 30502002	Process	400.0000	Tons	Moisture => 1.5%	

Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Eric R. Greitens, Governor Carol S. Comer, Director

MAY 2 1 2018

Mr. Alan Barnes
President
Con-Agg Companies, L.L.C. PORT-0769
2604 N. Stadium Blvd
Columbia, MO 65202

RE: New Source Review - Permit Number:
Project Number: 2018-03-026; Installation Number: PORT-0769

Dear Mr. Barnes:

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. In addition, please note that Con-Agg Companies, L.L.C. PORT-0769 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,

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.

If you have any questions, 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:csj

Enclosures

c: Northeast Regional Office
PAMS File: 2018-03-026

Permit Number: 052018-005