



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

April 30, 2020

Jeremy Polman
Manager
Fruitland Asphalt LLC
1620 Woodson Road
St. Louis, MO 63114

RE: Project Number: 2020-01-049; Installation Number: 031-0142
New Source Review - Permit Number:

Dear Jeremy Polman:

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 Fruitland Asphalt LLC 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,



Jeremy Polman
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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 Dakota Fox 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:dfj

Enclosures

c: St. Louis Regional Office
PAMS File: 2020-01-049

Permit Number: 042020-014



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: 042020-014 Project Number: 2020-01-049
Installation ID: 031-0142

Parent Company: Fruitland Asphalt LLC

Parent Company Address: 1620 Woodson Road, St. Louis, MO 63114

Installation Name: Fruitland Asphalt LLC

Installation Address: 5154 US Highway 61, Jackson, MO 63755

Location Information: Cape Girardeau County, S20, T32N, R13E

Application for Authority to Construct was made for:
Changing the portable plant to a stationary 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

April 30, 2020
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 (12)(A)10. "Conditions required by permitting authority."

1. Annual Emission Limit
 - A. Fruitland Asphalt LLC shall emit less than 15.0 tons of PM₁₀ 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. Fruitland Asphalt LLC 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

Fruitland Asphalt LLC 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. Control Device Requirement – Baghouse
 - A. Fruitland Asphalt LLC shall control emissions from the drum dryer (EP-4) using a baghouse, as specified in the permit application.
 - B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. This gauge or meter shall be located such that the Department of Natural Resources' employees may easily observe it.
 - C. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - D. Fruitland Asphalt LLC shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours when the plant is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

SPECIAL CONDITIONS:

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

- E. Fruitland Asphalt LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. Fruitland Asphalt LLC shall maintain an operating and maintenance log for the bag house, which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Fuel Requirement
- A. Fruitland Asphalt LLC shall burn exclusively fuel oil with a sulfur content less than or equal to 1.00% by weight in the drum dryer (EP-4).
 - B. Fruitland Asphalt LLC shall burn exclusively fuel oil with a sulfur content less than or equal to 0.0015% in the asphalt heater (EP-8).
 - C. Fruitland Asphalt LLC shall demonstrate compliance with Special Condition 5.A by obtaining records of the fuel's sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 Reference Methods.
5. Record Keeping Requirement
- Fruitland Asphalt LLC 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
- Fruitland Asphalt LLC 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 (5) REVIEW

Project Number: 2020-01-049
Installation ID Number: 031-0142
Permit Number: 042020-014

Fruitland Asphalt LLC:
5154 US Highway 61
Jackson, MO 63775

Complete: February 11, 2020

Parent Company:
Fruitland Asphalt LLC
1620 Woodson Road
St. Louis, MO 63114

Cape Girardeau County, S20, T32N, R13E

PROJECT DESCRIPTION

Portable asphalt plant PORT-0501 owned by Pace Construction Company is becoming a stationary plant that will be owned by Fruitland Asphalt LLC and renamed to Fruitland Asphalt LLC. Fruitland Asphalt LLC will operate the plant in Base Rock Minerals LLC Fruitland Quarry in Cape Girardeau County. Fruitland Asphalt LLC is capable of producing up to 350 tons of asphalt per hour. The drum dryer is equipped with a 100 MMBtu/hr burner, and a 1.5 MMBtu/hr heater will be used to heat the asphalt. Line power will be used to run the equipment.

The applicant is using a baghouse to control emissions from the drum dryer and is using undocumented watering to control fugitive emissions from haul roads and vehicular activity areas. The applicant is also using a vibrating screen to control emissions from the conveyor drop points.

This installation is located in Cape Girardeau County, an attainment area for all criteria pollutants.

This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(8), Table 2. Fugitive emissions count toward major source applicability. However, Category 27 does not apply to the 100 tons per year major source level thresholds. Therefore, the major source threshold for this asphalt plant is 250 tons per year.

TABLES

This plant has never before been permitted as a stationary plant; therefore, no permits have been issued to Fruitland Asphalt LLC from the Air Pollution Control Program.

Table 1: Emission Unit List

Emission Unit	Equipment Description
EP-01A	Bin Loading
EP-01B	Conveyor
EP-01C	Screen
EP-02	Drum Dryer
EP-03	Asphalt Heater
EP-05	Haul Road
EP-06A	Sand Stockpile
EP-06B	Limestone Stockpile
EP-07	Asphalt Tank
EP-08	Diesel Tank

Table 2 summarizes the emissions of this project. The potential emissions of the process equipment, excludes emissions from haul roads and wind erosion. The existing actual emissions were taken from 2019 EIQ. 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 a voluntary annual PM₁₀ emission limit of 15.0 tons per year in order to avoid refined modeling according to 10 CSR 10-6.060 (5)(D).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Potential Emissions of Process Equipment ^a	Existing Actual Emissions (2019 EIQ)	Potential Emissions of the Application ^b	Conditioned Potential Emissions ^c
PM	25.0	100.38	N/D	435.21	40.42
PM ₁₀	15.0	53.98	5.25	161.50	< 15.0
PM _{2.5}	10.0	37.64	0.88	51.12	4.75
SO _x	40.0	296.71	1.07	296.71	27.56
NO _x	40.0	141.88	1.92	141.88	13.18
VOC	40.0	73.75	0.91	73.75	6.85
CO	100.0	19.10	3.63	19.10	1.77
Formaldehyde	10.0/2.0 ^d	4.89	N/D	4.89	0.45
2-methylnaphthalene	10.0/0.01 ^d	0.26	N/D	0.26	0.02
Lead Compounds	10.0/0.01 ^d	0.02	0.01	0.02	0.002
GHG (CO ₂ e)	N/A	N/A	N/D	N/A	N/A
GHG (mass)	N/A	N/A	N/D	N/A	N/A
Total HAPs	25.0	15.75	N/A	15.75	1.46

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

^aExcludes haul road and storage pile emissions

^bIncludes haul road and storage pile emissions

^c Conditioned potential emissions account for a voluntary PM₁₀ de minimis limit

^d Screening Model Action Level (SMAL)

^e 2-methylnaphthalene is a member of the Polycyclic Organic Matter (POM) HAP group

Table 3 summarizes the ambient air quality impact analysis, which was performed in order to determine the impact of all pollutants with a potential to emit greater than their respective SMALs. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	RAL ($\mu\text{g}/\text{m}^3$) ^a	Averaging Time	Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$) ^b	Limited Impact ($\mu\text{g}/\text{m}^3$) ^c
C ₁₁ H ₁₀	23	24-hour	5.53	N/A
C ₁₁ H ₁₀ ^d	2.3	Annual	0.01	N/A

N/A = Not Applicable

^a Risk Assessment Level (RAL)

^b Modeled impact at maximum capacity with controls

^c Limit based on compliance with RAL

^d 2-methylnaphthalene is a member of the polycyclic organic matter (POM) HAP group

The following equipment was modeled using the AERSCREEN screen modeling software. The stack characteristics entered into the modeling software are listed in Table 3.

Table 4: AERSCREEN Input Parameters

Equipment Description	Stack Height (m)	Stack Inside Diameter (m)	Stack Gas Exit Velocity (m/s)	Stack Gas Exit Temperature (K)	Dispersion Coefficient
Drum Dryer (EP-4)	9.14	1.00	29.56	378.98	Rural

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 drum mix asphalt plant:

- Calculated using emission factors from AP-42 Section 11.1 "Hot Mix Asphalt Plants," April 2004
- SO_x emissions were calculated using the SO₂ and SO₃ emission factors from AP-42 Section 1.3 "Fuel Oil Combustion," September 1998 and assuming half of the sulfur up to 0.1 pound per ton of product is absorbed into the product.
- The asphalt plant is controlled by a baghouse, so the fabric filter controlled emission factor was used to calculate PM₁₀ emissions.
- Emissions from plant load-out were calculated using predictive equations found in AP-42 Table 11.1-14. Default values were used for asphalt volatility and mix temperature.

Emissions from the asphalt heater:

- Calculated using emission factors from AP-42 Section 1.3.

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 at least 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 PM₁₀ and a 41% control efficiency for PM_{2.5} were applied to the emission calculations for the use of undocumented watering.

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 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 (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below de minimis levels. Potential emissions of PM are above de minimis levels but remain below major levels.

APPLICABLE REQUIREMENTS

Fruitland Asphalt LLC 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

- 40 CFR 60 Subpart I, "Standards of Performance for Hot Mix Asphalt Facilities" applies to the equipment.
- Control of Sulfur Dioxide Emissions, 10 CSR 10-6.261 applies and the sulfur content of the fuel is less than 8,812 ppm.

OTHER DETERMINATIONS

- No Operating Permit is required because all criteria pollutants are conditioned below de minimis levels.
- Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400 does not apply because the drum dryer is controlled by a baghouse. All other sources are fugitive.

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 January 29, 2020, received January 29, 2020, designating Fruitland Asphalt LLC as the owner and operator of the installation.

Attachment A: PM₁₀ 12-Month Rolling Total Emissions Tracking Sheet

Fruitland Asphalt LLC

Project Number: 2020-01-049

Permit Number: 042020-014

Site Name: Base Rock Minerals LLC Fruitland Quarry
 Site Address: 5154 US Highway 61, Jackson, MO 637114
 Site County: Cape Girardeau County, S20, T32N, R13E

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)
<i>Example</i>	<i>25,000</i>	<i>0.1054</i>	<i>2,633</i>	<i>0.0</i>	<i>1.3</i>	<i>1.3 + 11 previous months at this site</i>
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¹Multiply the monthly production by the PM₁₀ composite emission factor.

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

³Add the monthly PM₁₀ emissions plus the SSM emissions from the same time period and divide by 2000 and

⁴Add 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 PM₁₀ per consecutive 12 months is necessary for compliance.

APPENDIX A

Abbreviations and Acronyms

% percent	MMBtuMillion British thermal units
°F degrees Fahrenheit	MMCFmillion cubic feet
acfm actual cubic feet per minute	MSDSMaterial Safety Data Sheet
BACT Best Available Control Technology	NAAQSNational Ambient Air Quality Standards
BMPs Best Management Practices	NESHAPs ..National Emissions Standards for Hazardous Air Pollutants
Btu British thermal unit	NO_xnitrogen oxides
CAM Compliance Assurance Monitoring	NSPSNew Source Performance Standards
CAS Chemical Abstracts Service	NSRNew Source Review
CEMS Continuous Emission Monitor System	PMparticulate matter
CFR Code of Federal Regulations	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
CO carbon monoxide	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CO₂ carbon dioxide	ppmparts per million
CO_{2e} carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMS Continuous Opacity Monitoring System	PTEpotential to emit
CSR Code of State Regulations	RACTReasonable Available Control Technology
dscf dry standard cubic feet	RALRisk Assessment Level
EQ Emission Inventory Questionnaire	SCCSource Classification Code
EP Emission Point	scfmstandard cubic feet per minute
EPA Environmental Protection Agency	SDS Safety Data Sheet
EU Emission Unit	SICStandard Industrial Classification
fps feet per second	SIPState Implementation Plan
ft feet	SMALScreening Model Action Levels
GACT Generally Available Control Technology	SO_xsulfur oxides
GHG Greenhouse Gas	SO₂sulfur dioxide
gpm gallons per minute	SSMstartup, shutdown, & malfunction
gr grains	tphtons per hour
GWP Global Warming Potential	tpytons per year
HAP Hazardous Air Pollutant	VMTvehicle miles traveled
hr hour	VOC Volatile Organic Compound
hp horsepower	
lb pound	
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	
m/s meters per second	
Mgal 1,000 gallons	
MW megawatt	
MHDR maximum hourly design rate	