

STATE OF 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: 122012-012 Project Number: 2012-11-052
 Installation Number: 097-0013

Parent Company: TAMKO Building Products, Inc.
 Parent Company Address: 601 North High Street, Joplin, MO 64801
 Installation Name: TAMKO Building Products, Inc.
 Installation Address: 601 North High Street, Joplin, MO 64801
 Location Information: Jasper County, S2, T27N, R33W

Application for Authority to Construct was made for:
 The installation of two new natural gas fired air make-up units and the addition of multiple portable kerosene fired heating units. 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.

DEC 21 2012
 EFFECTIVE DATE

Kym L. Moore
 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 these air contaminant sources. 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 these air contaminant sources.

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 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 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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Permit No.	
Project No.	2012-11-052

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."

TAMKO Building Products, Inc.
Jasper County, S2, T27N, R33W

1. Fuel Requirement-Portable Kerosene Heaters (EP54K)
 - A. TAMKO Building Products, Inc. shall only burn K-1 grade kerosene in their portable kerosene fired heaters (EP54K).
 - B. TAMKO Building Products, Inc. shall demonstrate compliance with Special Condition 1.A by obtaining records from the vendor for each shipment of fuel received.
 - C. TAMKO Building Products, Inc. shall keep the records required by Special Condition 1.B with the unit and make them available for Department of Natural Resources' employees upon request.
 - D. TAMKO Building Products, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

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

Project Number: 2012-11-052
Installation ID Number: 097-0013
Permit Number:

TAMKO Building Products, Inc.
601 North High Street
Joplin, MO 64801

Complete: November 19, 2012

Parent Company:
TAMKO Building Products, Inc.
601 North High Street
Joplin, MO 64801

Jasper County, S2, T27N, R33W

REVIEW SUMMARY

- TAMKO Building Products, Inc. has applied for authority to install two new natural gas fired air make-up units and add multiple portable kerosene fired heating units.
- HAP emissions are expected from the proposed equipment. The individual HAP emission is expected to be below the SMAL.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is located in Jasper County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-.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.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing are not required for the equipment.

- An application to amend your Part 70 Operating is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

TAMKO Roofing Products, Inc. is existing asphalt roofing (shingles) production installation located at Joplin, Missouri, in Jasper County. The installation has received twelve (12) construction permits previously from the Air Pollution Control Program and has submitted a Part 70 operating permit application on January 5, 2007, that is currently under review.

The following New Source Review permits have been issued to TAMKO Building Products, Inc. from the Air Pollution Control Program.

Table 1: Permit History

Project Number	Permit Number	Description
2011-06-010	112011-005	Increase Production
2011-05-011	052011-008	Section (3) Temporary Permit Raw Material Trial
2009-12-032	072009-007A	Amendment - Update Throughput
2009-10-024	022010-009	Section (3) Temporary Permit Topcoat System
2009-07-051	092009-004	Section (5) Limestone Transfer System
2009-01-033	072009-007	Section (5) Installation of rock grinding mills and equipment.
2008-11-049	062009-001	A Section (5) permit for the construction of a metal shingle fabrication line.
2008-12-052	022009-006	A Section (3) temporary permit for the construction of two portable road maintenance melters and a temporary laminant applicator.
1998-03-065	0499-005	A Section (5) permit for the construction of a spunbond production line for the manufacture of membranes and re-enforced membranes.
1998-02-0198	0598-017	A Section (5) permit for the construction of a pilot plant for the shredding and grinding of tabs and waste asphalt shingles.
2260-0013-019	1096-020	A Section (5) permit issued on October 15, 1996 for the replacement of two (2) horizontal asphalt storage tanks/natural gas fired heaters with two (2) vertical asphalt storage tanks with new natural gas heaters (i.e. Tank #13 and Tank #15).
2260-0013-015	0493-004	A Section (5) permit issued on April 6, 1993 for the construction of two (2) above ground vertical storage tanks. Note: Permit indicates below ground tanks which is not correct.
2260-0013-012	0292-004	A Section (5) permit issued on February 4, 1992 for the replacement of three (3) asphalt storage tanks and two (2) natural gas fired heaters with two (2) vertical asphalt storage tanks with two (2) new natural gas heaters.
2260-0013-10/11 & 2260-0013-017	0889-001 & 0889-001A	A Section (5) permit originally issued on August 4, 1989 to construct a AWA fire retardant production system. The amendment to this permit allowed the use of an additional raw material in the above process.
2260-0013-005	0184-001A to 0184-011A	A Section (5) permit issued on January 1984 for the construction of a new asphalt roofing production line. The permit required testing in accordance with NSPS Subpart UU, <i>Standards for Performance for Asphalt Roofing Plants</i> .

PROJECT DESCRIPTION

TAMKO Building Products, Inc. (TAMKO) is installing two new natural gas fired air make-up units (EP2012-01 and EP2012-02) which are both rated at 12.5 MMBtu/hr. TAMKO is also installing multiple portable kerosene heaters to be used for building heat. TAMKO is currently permitted to operate portable kerosene heaters (EP-54K) with a total capacity 11.5 gallons of kerosene per hour. TAMKO would like to increase the total capacity to 33.25 gallon per hour. TAMKO has also stated that they will only burn K-1 grade kerosene which is required to have sulfur content less than 0.04% by weight. Because NO_x potential emissions exceed the NO_x Insignificant Emissions Exemption Level, per 10 CSR 6.061, a construction permit is being issued for this new equipment.

EMISSIONS/CONTROLS EVALUATION

The emission factors used for the natural gas fired air make-up units were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4, *Natural Gas Combustion* (July 1998). The emission factors used for the portable kerosene heaters were obtained from AP-42, Section 1.3, *Fuel Oil Combustion*. The #2 Fuel Oil emission factors for residential furnaces were used as they were deemed the most representative for calculating potential emissions from kerosene combustion.

The following table provides an emissions summary for this project. Existing potential emissions were taken from permit number 112011-005. Existing actual emissions were taken from the installation's 2011 EIQ. Potential emissions of the application represent the potential of the new equipment assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	¹ Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	² New Installation Wide Potential Emissions
PM	25.0	N/D	N/D	0.24	>0.24
PM ₁₀	15.0	69.90	4.08	0.98	70.88
PM _{2.5}	10.0	>1.98	1.96	0.98	>2.96
SO _x	40.0	6.33	1.28	0.61	6.94
NO _x	40.0	74.81	4.83	12.45	87.26
VOC	40.0	250.64	45.11	0.66	251.30
CO	100.0	18.92	7.51	9.49	28.41
GHG (CO ₂ e)	75,000 / 100,000	N/D	N/D	15020.19	>15020.19
GHG (mass)	0.0 / 100.0 / 250.0	N/D	N/D	14931.20	>14931.20
HAPs	10.0 / 25.0	1.28	0.00	0.21	1.49

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

¹Existing Potential Emission were taken from permit number 112011-005. During the review of this permit a mistake in the calculation of the PM₁₀ emissions was found in the Existing Potential Emissions of permit number 112011-005. The amendment 072009-007A was not considered which increased PM₁₀ potential emissions by 2.80 tons. The Existing Potential Emissions column in this permit has been updated to reflect the increase that was not taken into account in the previous permit.

²New Installation Wide Potential Emissions equal the summation of the Existing Potential Emission and the Potential Emissions of the Application.

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 all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

TAMKO Building Products, 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *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 Sulfur Compounds*, 10 CSR 10-6.260 does not apply to the natural gas air fired make up units but does apply to the portable kerosene heaters.

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*, I recommend this permit be granted with special conditions.

Gerad Fox
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 16, 2012, received November 19, 2012, designating TAMKO Building Products, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SIC	Standard Industrial Classification
GHG	Greenhouse Gas	SIP	State Implementation Plan
gpm	gallons per minute	SMAL	Screening Model Action Levels
gr	grains	SO_x	sulfur oxides
GWP	Global Warming Potential	SO₂	sulfur dioxide
HAP	Hazardous Air Pollutant	tph	tons per hour
hr	hour	tpy	tons per year
hp	horsepower	VMT	vehicle miles traveled
lb	pound	VOC	Volatile Organic Compound
lbs/hr	pounds per hour		
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Shannon Lenker
General Manufacturing Manager
TAMKO Building Products, Inc.
601 North High Street
Joplin, MO 64801

RE: New Source Review Permit - Project Number: 2012-11-052

Dear Mr. Lenker:

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 and with your amended operating permit 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 have any questions regarding this permit, please do not hesitate to contact Gerad Fox, at the Department of Natural Resources' 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:gfl

Enclosures

c: Southwest Regional Office
PAMS File: 2012-11-052

Permit Number: