

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary for a
Construction Permit Application from
Continental Tire the Americas, LLC for
Changes to its Mixing Department at its
Existing Tire Manufacturing Plant in
Mount Vernon, Illinois

Site Identification No.: 081803AAB
Application No.: 12070023

Illinois EPA Contacts:

Permit Analyst: Jason Schnepf
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Important Dates:

Application Received: July 12, 2012
Comment Period Begins: September 4, 2012
Comment Period Closes: October 4, 2012

I. Introduction

Continental Tire the Americas, LLC (Continental) has applied for a construction permit for changes to its rubber mixing department at its tire manufacturing plant in Mount Vernon. The changes would enable use of advanced rubber formulations, which require more mixing to be used in the passenger and truck tires manufactured by the plant.

II. Project Description

Raw materials are added to batch-operated Banbury mixers to produce the feedstock for the subsequent tire manufacturing processes. Raw materials are mixed in several stages to achieve the necessary properties and composition.

This project will include construction of two new mixers and associated twin screw roller dies (Mixers #20 and #21) and modification of one existing mixer (Mixer #5) by increasing its capacity and replacing the existing drop mill with a twin screw roller die.

Volatile organic material (VOM) emissions occur during the mixing process as certain raw materials volatilize. These emissions will be controlled by natural gas fired afterburners. Handling of raw materials will cause particulate matter (PM) emissions, which will be controlled by filters. VOM emissions will also occur during the milling operation, which involves the twin screw roller dies, as the raw materials in the mixed rubber continue to volatilize, and will be controlled by a natural gas fired afterburner.

The project will also include installation of new carbon black day storage bins, which will be used to supply carbon black, a raw material used in the production of rubber, for the mixing equipment. All carbon black handling operations are controlled by filters.

This permit does not authorize an increase in the amount of rubber produced by the plant or in the plant's tire production rate.

III. Project Emissions

The changes in emissions from this project, as set forth in the application by Continental, are provided in Attachment 1 of the draft permit and also attached at the end of this project summary. For new equipment, e.g., Mixer 20, the increase in emissions is the potential emissions from the equipment. For the affected existing equipment, e.g., Mixer 5, the increase in emissions is the difference between the unit's actual emissions and the unit's projected emissions. The total increase in emissions is the sum of increases from both new and existing units. Upstream and downstream units are not affected because there will be no increase in rubber production and, consequently, no increase in emissions.

These changes would not result in a significant increase in emissions subject to the federal Prevention of Significant Deterioration of Air Quality (PSD) regulations.

IV. Applicable Emission Standards

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois. The Board has standards for sources of VOM. This project should readily comply with all applicable Board standards.

The mixers and dies are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63 Subpart XXXX, but are not subject to any emission limitations or other requirements under this rule.

The mixer and dies are not subject to federal control requirements of the New Source Performance Standards (NSPS), 40 CFR Part 60 Subpart BBB, because they are not cementing or spraying operations addressed by the requirements of the NSPS.

V. Draft Permit

The conditions of the draft permit contain limitations and requirements to assure that the modifications addressed by this application will comply with all applicable Board emissions standards.

The permit conditions also establish appropriate compliance procedures, including inspection practices, testing requirements, recordkeeping requirements, monitoring requirements and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the plant is operated within the limitations set by the permit.

VI. Request for Comments

It is the Illinois EPA's preliminary determination that the project meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a construction permit for this project.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

Attachment: Annual Emission Limits and Increases^a In Emissions For the Project (Tons/Year)

Affected Units	NO _x		CO		SO ₂		VOM		PM ^p		GHG (as CO ₂ e)		
	Limit	Increase	Limit	Increase	Limit	Increase	Limit	Increase	Limit	Increase	Limit	Increase	
Carbon Black Handling Operations													
New Day Bin #13-#24	---	---	---	---	---	---	---	---	---	1.10	1.10	---	---
Mixing and Dies ^c													
New Mixer #20 and Die	5.44	5.44	4.57	4.57	---	---	62.63	35.76	0.44	0.44	6,500	6,500	
New Mixer #21 and Die													
Other ^d													
Modified Mixer #5 and Die	0.99	0.99	0.83	0.83	---	---	n/a	1.61	n/a	0.02	1,200	1,200	
Other ^e													
Total ^f :		6.43		5.40		0.44		37.37		1.56		7,700	
Significance Threshold:		40		100		40		40		25/15/10		75,000	
Greater Than Significant?		No		No		No		No		No		No	

Notes:

- Minimal or no increase.
- a. Increases in emissions from new units are equal to the unit's potential to emit or permitted emissions (or "limit"). Baseline actual emissions are from the period January 2007 through December 2008. Increases in emissions at existing units are calculated by comparing projected actual emissions with baseline actual emissions as those terms are defined in 40 CFR 52.21(b).
- b. All PM assumed to be PM₁₀ and PM_{2.5}. The significant emission rates for PM, PM₁₀, and PM_{2.5} are 25 tons, 15 tons, and 10 tons per year, respectively. PM includes both filterable and condensable particulate.
- c. NO_x, CO, and GHG emissions from mixers represent combustion emissions from the RTOs controlling these operations. VOM emissions attributable to fuel combustion in the RTOs has also been included in the VOM limit/increase.
- d. Limits include "new" Mixer #19 with drop mill and "new" Tread End Cementing operation installed as part of a prior plant expansion (Construction Permit No. 11010008). These units are grouped with the project units because they vent to a common RTO. The increase in emissions does not include the units from Construction Permit No. 11010008 because they are unrelated to the proposed project.
- e. Limits include existing Mixer #6 & Drop Mill modified as part of a prior plant expansion (Construction Permit No. 11010008). These units are grouped with the project units because they vent to a common RTO. The increase in emissions does not include the units from Construction Permit No. 11010008 because they are unrelated to the proposed project.
- f. Totals may not match sum of limits for individual units due to rounding.