



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

AVERY T. DAY
ACTING COMMISSIONER

Wingfoot Commercial Tire Systems, LLC
Cumberland County
Westbrook, Maine
A-1037-71-C-R

Departmental
Findings of Fact and Order
Air Emission License
Renewal

FINDINGS OF FACT

After review of the air emission license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Wingfoot Commercial Tire Systems, LLC (Wingfoot) has applied to renew their Air Emission License permitting the operation of emission sources associated with their tire retreading facility.

The equipment addressed in this license is located at 39 Thomas Drive, Westbrook, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>
Tire Buffer #1	20 tires per hour	Cyclone/blower, water mister
Tire Buffer #2	20 tires per hour	Cyclone/blower, water mister
Cushion Gum Rubber Extruder	20 tires per hour	-
Cure Chamber #1	25 tires/3 hour cycle	-
Cure Chamber #2	25 tires/3 hour cycle	-
Tire Painting Booth	-	Air Filter
Wheel Refinisher	10 rims per hour	Cartridge Filter
Wheel Rim Powder Coating Booth	10 rims per hour	Cartridge Filter
Buffed Rubber Trailer	-	Air Filter

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The application for Wingfoot does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). Wingfoot is incapable of exceeding the major source thresholds for criteria pollutants and is considered a natural minor. Wingfoot is incapable of exceeding the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Description

The tire retreading process is a seven-step operation which takes a used tire casing, inspects and repairs it, textures the surface, applies a pre-cured tread or molds a tread by a vulcanizing process to a cushion gum, and cures the tread to the casing within a sealed, pressurized curing chamber at 265 degrees Fahrenheit. Once the curing is completed, the tire is removed from the chamber, inspected, and painted.

1. Tire Inspection

Tires being considered for retreading are visually inspected on an inspection spreader and, if acceptable, are inspected on a wide-scan machine. The inspection process looks for possible punctures, ruptured cords, tire separation and other tire damage which would not allow the tire to be processed properly.

2. Tire Buffing

The buffing process textures the tire surface for bonding of pre-cured tread rubber. Rubber is removed from the tire casing by a rasp equipped with metal blades specifically designed for tire buffing. Rubber is removed in small chunks, not as dust. The buffing machines are equipped with a water spray device which applies a water mist directly to the buffing blades during the buffing process. The buffed surface of the tire and the material being removed therefore remain cool during the process, reducing smoke and emissions.

To further aid in controlling emissions and maintaining a clean operating area, the buffers are connected to a high-efficiency cyclone/blower. The cyclone/blower, when properly installed, has proven to have a particulate capture efficiency of more than 99%. The rubber particulate control/collection system is an integral part of the tire buffing process: for the buffer to operate the cyclone/blower must be operational. The cyclone/blower system facilitates the movement of the buffed rubber material away from the buffing machine – without the cyclone/blower equipment, the buffer would quickly plug due to the accumulation of buffed material.

The removed rubber material is pulled through duct work by the cyclone/blower and is deposited in an enclosed trailer for recycling. The trailer is equipped with a reusable filter made of 100 micron material with an area of 32 square feet which has a filter bag with a bottom zipper for easy emptying, cleaning, and inspection. The filter bag is attached to the left rear trailer door to allow for easy visual observation.

3. Cushion Gum Rubber Application

Each buffed tire receives a 3.5 pound slab of uncured cushion gum rubber applied to the buffed tread surface. The cushion gum rubber is applied in a non-extruded manner. The tacky surface helps bond the tread to the buffed surface.

4. Pre-cured Tread Application

Tread application is completed on a semi-automatic tread builder which uniformly applies the pre-cured tread rubber to the tire surface and cuts it to the correct length. The uncured rubber material physically bonds the tread rubber to the tire casing during the curing cycle. After the tread rubber is applied, the tire is forwarded to the curing area.

5. Tire Curing

The prepared tires are encased in flexible rubber envelopes and placed on curing rims or sealing rings and then placed in a curing chamber. The chamber is sealed and pressurized to 85 PSI and the tires are cured at 265 degrees Fahrenheit for three hours. When the curing process is complete, the tires are removed from the chamber, the rims or sealing rings and envelopes are removed, and the tires are forwarded to the final inspection area.

6. Final Inspection Area

The cured tire is placed on a spreader and a final inspection is given to ensure the tread rubber is adequately bonded to the casing.

7. Painting and Sealing

After final inspection, the outside tire surface is painted and sealed. The water based paint coating is applied inside a metal chamber. The water based paint coating contains no VOCs or petroleum solvents. The application method does not use compressed air for atomization purposes. After drying, the tire is ready for shipment to the end user.

C. Process Source Emissions

BPT for particulate matter emissions from Tire Buffers #1 and #2 is the use of a cyclone/blower and water mister and limiting visible emissions to 10% opacity on a six (6) minute block average basis. BPT for particulate matter emissions from the Wheel Refinisher is the use of a cartridge filter and limiting visible emission to no more than 10% opacity on a six (6) minute block average basis. VOC emissions result from the retreading process and from cleaning repaired spots on the tires.

Small amounts of HAPs are emitted from the tire buffing and wheel refinishing operations.

BPT for VOC and HAP emissions includes monthly record keeping indicating the amount of chemicals used and the VOC and HAP content of those chemicals. Monthly material use reports are completed from daily production reports and end-of-month inventory inspections. Mass balances for VOCs and HAPs are used for calculations unless actual monitoring has been carried out, in which case the monitoring figures will be used.

D. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

E. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

F. Annual Emissions

1. Total Annual Emissions

Wingfoot shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on 4,160 hrs/yr for Tire Buffer #1, Tire Buffer #2, the Cushion Gum Rubber Extruder, Cure Chamber #1 and Cure Chamber #2, 3,120 hrs/yr for the Wheel Refinisher and the Wheel Rim Powder Coating Booth, and 4,160 hrs/yr for the miscellaneous fugitive emission sources:

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC	HAP
Facility Wide Limit	0.8	0.8	0.0	0.0	0.0	1.9	Single – 0.31 Total – 0.34
Total TPY	0.8	0.8	0.0	0.0	0.0	1.9	Single – 0.31 Total – 0.34

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through ‘Tailoring’ revisions made to EPA’s *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility’s operating hours restrictions;
- worst case emission factors from the following sources: U.S. EPA’s AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1037-71-C-R subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the

next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Tire Buffers #1 and #2 and the Wheel Refinisher**

- A. Particulate matter emissions from Tire Buffers #1 and #2 shall be controlled by a cyclone/blower system and a water mister. Particulate matter emissions from the Wheel Refinisher shall be controlled by a cartridge filter. [06-096 CMR 115, BPT]
B. Visible emissions from Tire Buffers #1 and #2 and the Wheel Refinisher shall not exceed 10% opacity on a six (6) minute block average basis. [06-096 CMR 115, BPT]

(17) **Buffed Rubber Trailer**

- A. Wingfoot shall operate and maintain the thirty-two (32) square foot filter on the Buffed Rubber Trailer at least once a month and maintain records of the inspections conducted. The maintenance records shall contain information on maintenance and filter replacement [06-096 CMR 115, BPT]
B. Visible emissions from the Buffed Rubber Trailer shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(18) **VOCs and HAPs**

- A. Wingfoot shall not exceed a facility wide VOC emission rate of 1.9 tons per year based on a calendar year total. VOC emissions shall be calculated on a monthly and calendar year basis. [06-096 CMR 115, BPT]
B. Wingfoot shall not exceed a facility wide HAP emission rate of 0.31 tons per year based on a single hap and 0.34 tons per year for all HAPs combined, based on a calendar year total. HAP emissions shall be calculated on a monthly and calendar year basis. [06-096 CMR 115, BPT]

(19) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any

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1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(20) **General Process Sources**

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(21) Wingfoot shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 14 DAY OF September, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Maureen Allen Robert Case* for
AVERY T. DAY, ACTING COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S.A. §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 5, 2015

Date of application acceptance: February 9, 2015

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

