



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

Parker-Hannifin Corporation
York County
Kittery, Maine
A-1067-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Parker-Hannifin Corporation (Parker) has applied for an Air Emission License permitting the operation of emission sources associated with their Kittery facility which manufactures pneumatic filters, regulators, lubricators, and valves.

The equipment addressed in this license is located at 9 Cutts Road, Kittery, ME.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Install Date	Stack #
Boiler #1	2.9	30.9	Propane, Negl.	1968	1
Boiler #2	2.9	30.9	Propane, Negl.	1968	1
Boiler #3	2.9	30.9	Propane, Negl.	1974	1
Boiler #4	2.2	23.4	Propane, Negl.	2007	2
Burn off Oven	1.6	17.0	Propane, Negl.	1995	6
Cure Oven	2.4	25.5	Propane, Negl.	1995	7
Degas Oven	2.0	21.3	Propane, Negl.	1995	8

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1235 CENTRAL DRIVE, SKYWAY PARK
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Parker operates other small propane-fired heating units of less than 1.0 MMBtu/hr each for washing and evaporative processes. Parker has submitted a list of these units to the Department and they are considered insignificant according to 06-096 CMR 115 of the Department's rules.

C. Application Classification

The new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Significance. Level (TPY)
PM	3.7	100
PM ₁₀	3.7	100
SO ₂	0.4	100
NO _x	14.9	100
CO	2.5	100
VOC	0.7	50
CO ₂ e	90,000	100,000

The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). The facility is licensed below the major source thresholds and is considered a natural or true minor.

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 as well as for those sources located in designated non-attainment areas.

Process Description

Parker Hannifin manufactures pneumatic filters, regulators, lubricators, and valves. There are a variety of machining operations as well as assembly processes.

The three main boilers are propane fired and provide steam heat for the entire facility building, with only one or two heating boilers operating at a time. The facility also operates a machine shop wash boiler. This boiler is propane fired and provides steam heat for the machine shop wash system tanks to heat the water to wash the castings after machining to get the water soluble coolant off of the powder coated machine zinc and aluminum castings. This wash system is a five stage (tank) system.

In addition, Parker Hannifin operates a burn off oven, degas oven, and a cure oven. The burn off oven is propane fired and is used to burn off the residuals on the racks used in powder coatings because over time the steel racks get too much powder coat on the racks to be able to send a charge through the rack to statically charge the castings. The burn off oven burns off the excess powder coating on the racks. The degas oven is used to get any trapped air out of the castings prior to curing. The cure oven is used to heat/cure the powdered coatings after being sprayed on the part.

B. Emission Units

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Definitions Regulation, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

Boilers #1, #2, #3, #4 and the Burn off Oven, Cure Oven, Degas Oven

Parker operates four propane fired boilers each with a maximum design capacity rating of less than 3.0 MMBtu/hr. Parker also operates a 1.6 MMBtu/hr Burn off oven, a 2.4 MMBtu/hr cure oven, and a 2.0 MMBtu/hr degas oven. The regulated pollutants emitted from the boilers and ovens, are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Based on the relatively small size of the boilers and ovens and the quantity of pollutants that could potentially be emitted, it is determined by the Department that any add-on pollution control device would be economically unjustified.

a. PM and PM₁₀

Parker has proposed combustion of propane and good combustion practices as BACT for particulate matter. 06-096 CMR 103 of the Department's regulations is not applicable to Parker since all units are below 3.0 MMBtu/hr; however the BACT emission limit of 0.05 lb/MMBtu is more stringent than this regulation would have required.

- b. SO₂
Parker will combust propane which inherently has a low sulfur fuel content associated with it, as BACT.
- c. NO_x
Parker will combust propane and adhere to good combustion practices as BACT for NO_x.
- d. CO
Parker will combust propane and follow good combustion practices as BACT for CO.
- e. VOC
Parker will combust propane and follow good combustion practices as BACT for VOC.
- f. Opacity
06-096 CMR 101 of the Department's regulations (Visible Emissions) is applicable to Parker. Visible Emissions from each propane-fired unit shall not exceed 10% opacity on a six minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

BACT Findings (emission factors) for firing propane:

PM/PM ₁₀ –	0.05 lb/MMBtu: Department's Air Emissions License guidance document dated March 2002)
SO ₂ –	1 gr/100 ft ³ sulfur, 0.1 lb/10 ³ gal: AP-42, Table 1.5-1 (dated 07/08)
NO _x –	13 lb/10 ³ gal: AP-42, Table 1.5-1 (dated 07/08)
CO –	7.5 lb/10 ³ gal: AP-42, Table 1.5-1 (dated 07/08)
VOC –	0.8 lb/10 ³ gal: AP-42, Table 1.5-1 (dated 07/08)

Due to the size of each fuel burning unit, the boilers will not be subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Because Boilers #1, #2, #3, and #4 are propane fired, they will not be subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* 40 CFR Part 63 Subpart JJJJJ.

Wash Systems

Parker operates pre-treatment wash systems with various dip tank stages. The wash systems are used to clean the metal parts in preparation for subsequent coating applications. The adhesion of the powder coating is enhanced after the wash systems clean the parts. The wash system for the machine shop is heated by Boiler #4. Wash water is evaporated in either of two evaporators with propane heaters that are considered insignificant based on size per 06-096 CMR 115 Appendix B. The cleaning solutions used in the wash systems throughout the facility consist of minimal VOC concentrations and are estimated to be less than 0.5 tons per year of VOC total emitted on an annual basis. BACT from the wash system is the continued use of low chemical concentration cleaners. Due to the minimal VOC emissions expected from the wash systems, no further monitoring or recordkeeping is required for this area.

Shot Blast

Parker operates a steel shot blast unit for surface preparation prior to coating. Parker operates a dust collection system on this unit. The dust collection system vents indoors, therefore, there are no associated fugitive emissions for this process.

Powder Coating Booths

Parker operates an enclosed powder coating booth with filters. There are no fugitive emissions associated with this process.

C. Facility Emissions and Fuel Use Caps

Parker's facility-wide licensed allowed emissions are based on the maximum amount of propane that could be fired if the units were operating 8760 hours per year. Parker operates at a significantly lower propane fuel usage on an actual basis; however, to avoid a propane fuel use limit and recordkeeping as part of an air emissions license requirement, emissions will be based on the maximum amount. This also shows that Parker is considered a natural minor and not a synthetic minor air emission source. Parker operates and is licensed below 9.9 tons per year of any individual HAP and less than 24.9 tons per year of total HAP.

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	Tons/year
PM	3.7
PM ₁₀	3.7
SO ₂	0.4
NO _x	14.9
CO	2.5
VOC	0.7
CO ₂ e	90,000

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) means the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases (GHG) for purposes of licensing are calculated and reported as carbon dioxide equivalents (CO₂e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Parker is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1067-71-A-N 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 emission 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) Boilers #1, #2, #3, and #4 and Burn-off Oven, Cure Oven, Degas Oven

A. Fuel

Parker shall fire propane in all boilers and process ovens as specified in this air emissions license.

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boilers #1, #2, #3, #4	PM	0.05	06-096 CMR 115, BACT
Burn-off Oven, Cure Oven & Degas Oven	PM	0.05	06-096 CMR 115, BACT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1, #2, and #3 (each)	0.2	0.2	0.1	0.6	0.1	0.1
Boiler #4	0.1	0.1	0.1	0.5	0.1	0.1
Burn-off Oven	0.1	0.1	0.1	0.3	0.1	0.1
Cure Oven	0.1	0.1	0.1	0.5	0.1	0.1
Degas Oven	0.1	0.1	0.1	0.4	0.1	0.1

D. Visible Emissions

Visible emissions from each boiler and process oven firing propane shall not exceed 10% opacity on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 3 hour period. [06-096 CMR 101]

(17) 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]

- (18) Parker 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 6th DAY OF April, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Patricia W. Aho*
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 23, 2012

Date of application acceptance: February 7, 2012

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality

