



DEPARTMENT ORDER

**Steelstone Industries, Inc.
Aroostook County
Houlton, Maine
A-112-71-N-M**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

Steelstone Industries, Inc. (Steelstone) was issued Air Emission License A-112-71-M-R/A on February 25, 2015, for the operation of emission sources associated with their portable asphalt plants, concrete batch plants, and crushed stone and gravel facility.

Steelstone has requested a minor revision to their license in order to remove Asphalt Plant #2, the Primary Jaw Crusher, the Secondary Cone Crusher, and Generator #2 from the license, and to replace the Hot Oil Heater.

The main office is located at 154 Steelstone Street, Houlton, Maine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License Amendment:

Asphalt Plant

<u>Equipment</u>	<u>Process Rate (tons/hour)</u>	<u>Design Capacity (MMBtu/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Control Device(s)</u>	<u>Stack ID</u>	<u>Date of Manuf.</u>
Asphalt Plant #2, drum mix plant*	140	76.7	Distillate fuel, 0.5%	Baghouse	2	1981

*Removed from license

Heating Equipment

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Maximum Firing Rate</u>	<u>Date of Manuf.</u>
Hot Oil Heater*	1.3	distillate fuel, 0.0015%	7 gal/hr	2010
Heatec Heater**	1.5	distillate fuel, 0.0015%	10.7 gal/hr	2017
		natural gas, neg.	1,456 scf/hr	

*Removed from license

**New to license

Rock Crushers

<u>Designation</u>	<u>Powered</u>	<u>Process Rate (tons/hour)</u>	<u>Date of Manufacture</u>	<u>Control Device</u>
Primary Jaw*	electrical	100	Pre-1983	Spray Nozzles
Secondary Cone*	electrical	50	Pre-1983	Spray Nozzles

*Removed from license

Engines

<u>Unit ID</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>
Generator #2*	5.37	41.4	distillate fuel, 0.0015%	1981

*Removed from license

C. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

This amendment will increase emissions by less than 4 ton/year for each single pollutant and less than 8 ton/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

II. **BEST PRACTICAL TREATMENT**

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 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

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

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. Heatec Heater

The Heatec Heater is a hot oil heater with a maximum capacity of 1.5 MMBtu/hr that fires natural gas or distillate fuel with maximum sulfur content of 0.0015% by weight. The heater was manufactured in 2017.

The Heatec Heater is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, the distillate fuel purchased or otherwise obtained for use in the Heatec Heater shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

The BACT emission limits for the hot oil heater were based on the following:

Natural Gas

PM/PM ₁₀	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO ₂	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO _x	–	100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
CO	–	84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
Visible Emissions	–	06-096 C.M.R. ch. 115, BACT

Distillate Fuel

- PM, PM₁₀ – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO_x – 20 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1000 gal based on AP-42 Table 1.3-3 dated 5/10
- Opacity – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the Heatec Heater are the following:

<u>Unit</u>	<u>Fuel</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Heatec Heater	Nat. gas	0.08	0.08	--	0.15	0.12	0.01
	Distillate	0.12	0.12	--	0.21	0.05	--

When firing natural gas, visible emissions from the Heatec Heater shall not exceed 10% opacity on a six-minute block average basis.

When firing distillate fuel, visible emissions from the Heatec Heater shall not exceed 20% opacity on a six-minute block average basis.

2. Periodic Monitoring

Periodic monitoring for the heater shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used and sulfur content of the fuel, if applicable.

3. New Source Performance Standards

The Hot Oil Heater does not heat water. It does not meet the definition of a “steam generating unit” and therefore is not subject to New Source Performance Standards (NSPS) *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

4. National Emission Standards for Hazardous Air Pollutants

The Hot Oil Heater does not heat water. It does not meet the definition of a “boiler” and therefore is not subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63 Subpart JJJJJ.

C. Annual Emissions

Steelstone shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a 400,000 gallon limit of spec. waste oil fired in Asphalt Plant #1, 60,000 gallons of distillate fired in Generator #1, and the higher emission factor for distillate or natural gas fired in the hot oil heaters:

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
Asphalt Plant #1	2.8	2.8	19.4	8.0	26.7	0.6
Generator #1	0.5	0.5	0.1	18.2	3.9	1.5
Tank Heater #1	0.4	0.4	0.1	0.6	0.2	0.1
Heatec Heater	0.5	0.5	0.1	1.0	0.6	0.1
Total TPY	4.2	4.2	19.7	27.8	31.4	2.3

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 Amendment A-112-71-N-M, subject to the conditions found in Air Emission A-112-71-M-R/A and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof 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.

Condition (17) is hereby removed from Air Emission License A-112-71-M-R/A.

The following shall replace conditions (19) and (20) in order to remove reference to the Primary Jaw Crusher, Secondary Cone Crusher, and Generator #2, and add condition (27) to Air Emission License A-112-71-M-R/A:

(19) **Nonmetallic Mineral Processing Plants**

- A. Steelstone shall install and maintain spray nozzles for control of particulate matter on the Portable Jaw Crusher, the Portable Cone Crusher, and the Remco VSI Crusher. [06-096 C.M.R. ch. 115, BPT]
- B. Steelstone shall maintain records detailing and quantifying the hours of operation on a daily basis for all of the crushers. The operation records shall be kept on-site at the rock crushing location. [06-096 C.M.R. ch. 115, BPT]
- C. Visible emissions from the Portable Jaw Crusher, the Portable Cone Crusher, and the Remco VSI Crusher shall each be limited to no greater than 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101]
- D. Visible emissions from nonmetallic mineral processing plant equipment other than crushers (transfer points on belt conveyors, screening operations, etc.) shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]
- E. The Portable Jaw Crusher, Portable Cone Crusher, and Remco VSI Crusher shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [06-096 C.M.R. ch. 115, BPT and 40 C.F.R. § 60.670(c)(2)]

(20) **Generator #1**

A. Fuel Use

- 1. Generator #1 is licensed to fire distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). [06-096 C.M.R. ch. 115, BPT]
- 2. Total fuel use for Generator #1 shall not exceed 60,000 gal/yr of distillate fuel. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 (2.44 MMBtu/hr) distillate fuel	0.29	0.29	0.01	10.76	2.32	0.85

C. Visible emissions from the generator shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(27) Tank Heater #1 and Heatec Heater

A. Fuel

1. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT/BACT]
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT/BACT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT/BACT]:

Unit	Fuel	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Tank Heater #1	Distillate	0.08	0.08	--	0.14	0.04	--
Heatec Heater	Nat. Gas	0.08	0.08	--	0.15	0.12	0.01
	Distillate	0.12	0.12	--	0.21	0.05	--

C. Visible emissions from heaters firing natural gas shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT/BACT]

D. Visible emissions from heaters firing distillate fuel shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT/BACT]

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E. When firing natural gas, visible emissions from the Heatec Heater shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF January, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim
MELANIE LOYZIM, ACTING COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-112-71-M-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: July 23, 2018

Date of application acceptance: July 25, 2018

Date filed with the Board of Environmental Protection:

This Order prepared by Benjamin Goundie, Bureau of Air Quality.

