



DEPARTMENT ORDER

**Shaw Brothers Construction, Inc.**  
**Cumberland County**  
**Gorham, Maine**  
**A-425-71-Q-M**

**Departmental**  
**Findings of Fact and Order**  
**Air Emission License**  
**Amendment #4**

**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 (Department) finds the following facts:

**I. REGISTRATION**

A. Introduction

Shaw Brothers Construction, Inc. (Shaw Brothers) was issued Air Emission License A-425-71-L-R/M on June 17, 2014, for the operation of emission sources associated with their crushed stone and gravel facility. The license was subsequently amended on January 25, 2018 (A-425-71-N-A), on October 26, 2018 (A-425-71-O-A), and on August 1, 2019 (A-425-71-P-M).

Shaw Brothers has requested an amendment to their license in order to address several inconsistencies between their own naming convention for their licensed equipment versus the equipment names as referenced in their current air emission license. Additionally, Shaw Brothers has requested to correct an error in the drive arrangement listed for Cone Crusher LT300. The changes that were specifically requested are as follows:

- Jaw Crusher L100 should be Jaw Crusher LT100
- Jaw Crusher L105 #2 should be Jaw Crusher LT105 #2
- Jaw Crusher L125 should be Jaw Crusher LT125
- Cone Crusher L125 should be Cone Crusher HP300, and is powered by grid electrical power and not by Diesel #4;
- Jaw Crusher L416 should be Jaw Crusher Pioneer 3042; and
- Cone Crusher LT300 is powered by Diesel #7, not grid electrical power.

The equipment addressed in this license amendment is located at 341 Mosher Road in Gorham, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

**Rock Crushers**

Designation	Powered	Process Rate (TPH)	Date Manuf.	Control Device
Jaw Crusher LT100	Diesel #1	100	1996	Spray Nozzles
Jaw Crusher LT105 #2	Diesel #8	100	2005	Spray Nozzles
Jaw Crusher LT125	Diesel #3	470	1994	Spray Nozzles
Cone Crusher HP300	Grid Electric	300	1997	Spray Nozzles
Jaw Crusher Pioneer 3042	Grid Electric	100	2006	Spray Nozzles
Cone Crusher LT300	Diesel #7	300	2002	Spray Nozzles

C. Application Classification

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

Shaw Brothers has an annual fuel limit for the distillate fuel-fired engines that drive their portable rock crushers. Neither the correction of equipment names in the license, nor the addition of an additional engine to the equipment roster in their air emission license will increase licensed emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

D. Facility Classification

With the annual fuel limit on the distillate fuel-fired engines, the facility is licensed as follows:

- As a synthetic minor source of air emissions, because Shaw Brothers is subject to license restrictions that keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for 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 C.M.R. ch. 100. 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. Rock Crushers Being Renamed**

The following rock crushers are being renamed in this air emission license amendment.

<b>Old Name (in A-425-71-L-R/M)</b>	<b>New Name</b>
Jaw Crusher L100	Jaw Crusher LT100
Jaw Crusher L105 #2	Jaw Crusher LT105 #2
Jaw Crusher L125	Jaw Crusher LT125
Cone Crusher L125	Cone Crusher HP300
Jaw Crusher L416	Jaw Crusher Pioneer 3042

Shaw Brothers has requested that these names be changed in their license to reflect their current equipment designations. These rock crushers have not been rebuilt, nor have any changes been made to their production rates, their emission controls, or their drive systems.

**C. Cone Crusher LT300**

Cone Crusher LT300 was listed in air emission license A-425-71-L-R/M (June 17, 2014) as being powered by Diesel #7. In air emission license amendment A-425-71-P-M (August 1, 2019), this crusher was shown as having been converted to being driven by grid electrical power. This drive conversion did not take place. This amendment corrects this error and provides the following BPT determination for Diesel #7, which was never removed as the drive for Cone Crusher LT300.

**D. Diesel #7**

Diesel #7 is a distillate fuel-fired engine that was manufactured in 2005 and is used to provide power for Cone Crusher LT300. It has a maximum heat input rating of 3.6 MMBtu/hr and fires ultra-low sulfur content distillate fuel at a maximum rate of 26.0 gallons/hr. It is subject to the sitewide annual fuel limit of 75,000 gallons for the facility's generators.

Because Diesel #7 is considered a non-road engine and is portable, it is not subject to either 40 C.F.R. Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, or 40 C.F.R. Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*.

The BPT emission limits for Diesel #7 were based on the following:

PM / PM <sub>10</sub>	- 0.12 lb/MMBtu, from 06-096 C.M.R. ch. 103
SO <sub>2</sub>	- Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur, by weight)
NO <sub>x</sub>	- 4.41 lb/MMBtu, from AP-42, Table 3.3-1 dated 10/96
CO	- 0.95 lb/MMBtu, from AP-42, Table 3.3-1 dated 10/96
VOC	- 0.35 lb/MMBtu, from AP-42, Table 3.3-1 dated 10/96
Visible Emissions	- 06-96 C.M.R. ch. 101

The BPT emission limits for Diesel #7 are the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Diesel #7	PM	0.12	06-096-C.M.R ch. 103(2)(B)(1)(a)

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Diesel #7	0.4	0.4	0.01	15.9	3.4	1.3

Visible emissions from Diesel #7 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Shaw Brothers may comply with the following work practice standards in lieu of the numerical visible emissions standard.

1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
2. Operate the generator in accordance with the manufacturer's emission-related operating instructions.
3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.
4. Operate the generator, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

E. Summary of Rock Crushers, as Corrected

The following is being presented to consolidate the rock crusher and drive information from the current air emission license and subsequent license amendments into one comprehensive table:

Designation	Shaw Brothers ID No.	Powered By	Process Rate (TPH)	Date of Manuf.	Control Device
Jaw Crusher LT100	SB1458	Diesel #1	100	1996	Spray Nozzles
Jaw Crusher LT105 #2	SB1407	Diesel #8	100	2005	Spray Nozzles
Jaw Crusher LT125	SB1484	Diesel #3	470	1994	Spray Nozzles
Cone Crusher HP300	SB1485	Grid Power	300	1997	Spray Nozzles
Jaw Crusher Pioneer 3042	SB1463	Grid Power	100	2006	Spray Nozzles
Cone Crusher LT300	SB1401	Diesel #7	300	2002	Spray Nozzles
Cone Crusher FT200	SB1405	Diesel #9	200	2005	Spray Nozzles
Jaw Crusher LT106 #1	SB1413	Diesel #10	100	2017	Spray Nozzles
Jaw Crusher LT106 #2	SB1414	Diesel #11	100	2017	Spray Nozzles
Telsmith Cone Crusher #1	--	Grid Power	600	2017	Water Spray System
Telsmith Cone Crusher #2	--	Grid Power	600	2017	Water Spray System
Telsmith 4448 Jaw Crusher	--	Grid Power	1030	2017	Water Spray System
Cone Crusher LT220D	SB1416	Diesel #12	250	2018	Spray Nozzles

F. Annual Emissions

This license amendment will not change the facility's licensed annual emissions.

III. **AMBIENT AIR QUALITY ANALYSIS**

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 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:

Pollutant	Tons/Year
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	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 amendment.

### **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 Amendment A-425-71-Q-M subject to the conditions found in Air Emission License A-425-71-L-R/M, in amendments A-425-71-N-A, A-425-71-O-A, and A-425-71-P-M, and the following conditions.

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

### **SPECIFIC CONDITIONS**

The following condition shall replace Condition (16)(A) of Air Emission License A-425-71-P-M dated August 1, 2019.

#### **(16) Rock Crushers**

- A. Shaw Brothers shall install and maintain spray nozzles for particulate matter control on all of the jaw and cone rock crusher units in operation at their facility:
- Jaw Crushers LT100, LT105 #2, LT125, Pioneer 3042, LT106 #1, LT106 #2, and the Telsmith 4448; and
  - Cone Crushers HP300, LT300, FT200, Telsmith #1, Telsmith #2, and LT220D.

Shaw Brothers shall operate and maintain the spray nozzles and water spray systems on these rock crushers as necessary to limit the visible emissions from each crusher to no greater than 10% opacity on a six (6) minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT and 06-096 C.M.R. ch 101]

The following condition shall replace Condition (16)(H) of Air Emission License A-425-71-L-R/M dated June 17, 2014.

- H. Jaw Crusher LT125, Cone Crusher HP300, Cone Crusher LT300, and Cone Crusher FT200 are subject to 40 C.F.R. Part 60 Subparts A and OOO. Shaw Brothers shall comply with the notification and record keeping requirements of 40 C.F.R. Part 60.676 and Part 60.7, except for Section (a)(2) of 60.7 per Subpart OOO, § 60.676(h).

The following condition shall replace Condition (17)(A)(1) of Air Emission License A-425-71-P-M dated August 1, 2019.

(17) **Portable Diesel Generators**

A. Fuel Use

1. Diesels #1, #3, #7, #8, #9, #10, #11, and #12 shall fire only distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur, by weight). [06-096 C.M.R. ch. 115, BACT/BPT]

The following condition shall replace Conditions (17)(B) through (D) of Air Emission License A-425-71-P-M dated August 1, 2019.

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Diesel #3 – CAT 3406	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Diesel #7 – CAT C-12	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Diesel #1 – CAT 3306	0.3	0.3	0.01	9.7	2.1	0.8
Diesel #3 – CAT 3406	0.4	0.4	0.01	15.9	3.4	1.3
Diesel #7 – CAT C-12	0.4	0.4	0.01	15.9	3.4	1.3
Diesel #8 – CAT 3306	0.3	0.3	0.01	9.7	2.1	0.8
Diesel #9 – JD 6081	0.2	0.2	0.01	5.8	1.3	0.5
Diesel #10 – CAT 7.1	0.6	0.6	0.01	8.4	1.8	0.7
Diesel #11 – CAT 7.1	0.6	0.6	0.01	8.4	1.8	0.7
Diesel #12 – CAT C-13	0.9	0.9	0.01	13.0	2.8	1.1

D. Visible Emissions

Visible emissions from Diesels #1, #3, #7, #8 and #9 shall not exceed 20% opacity on a six (6) minute block average basis, except for periods of startup during which time Shaw Brothers may comply with the following work practice standards in lieu of the numerical opacity standard. [06-096 C.M.R. ch. 115, BPT]

1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
2. Operate the generators in accordance with the manufacturer's emission-related operating instructions.
3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.



- 4. Operate the generator, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

DONE AND DATED IN AUGUSTA, MAINE THIS 26<sup>th</sup> DAY OF MAY, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
GERALD D. REID, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-425-71-L-R/M.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 20, 2020

Date of application acceptance: March 20, 2020

Date filed with the Board of Environmental Protection:

This Order prepared by Patric J. Sherman, Bureau of Air Quality.

**FILED**  
**MAY 26, 2020**  
**State of Maine**  
**Board of Environmental Protection**