



DEPARTMENT ORDER

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

**Departmental**  
**Findings of Fact and Order**  
**Air Emission License**  
**Amendment #5**

**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

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 located at 341 Mosher Road, Gorham, Maine. The license was subsequently amended on January 25, 2018 (A-425-71-N-A), October 26, 2018 (A-425-71-O-A), August 1, 2019 (A-425-71-P-M), and May 26, 2020 (A-425-71-Q-A).

Shaw Brothers has requested an amendment to their license in order to add a new portable rock crusher and engine and remove Jaw Crusher LT105 #2 and Diesel #8 engine.

B. Emission Equipment

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

**Rock Crushers**

<b>Designation</b>	<b>Powered</b>	<b>Process Rate (tons/hour)</b>	<b>Date of Manufacture</b>	<b>Control Device</b>
Jaw Crusher LT120	Diesel #13	595	2021	Spray Nozzles
<i>Jaw Crusher LT105 #2 *</i>	<i>Diesel #8</i>	<i>100</i>	<i>2005</i>	

\* This equipment has been sold and will be removed from this license.

**Engines**

Unit ID	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
Diesel #13	2.4	17.5	distillate fuel, 0.0015%	2021
Diesel #8 *	2.2	15.9		2005

\* This equipment has been sold and will be removed from this license.

C. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants (not including concrete batch plants), or any other facility processing nonmetallic minerals.

Portable or Non-Road Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or Logs mean either hardcopy or electronic records.

D. 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 not increase licensed emissions of any pollutant; however, it does include the addition of new equipment. Therefore, this modification is determined to be a minor modification and has been processed as such.

E. Facility Classification

With the annual fuel limit on the diesel engines, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO<sub>x</sub>, 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**

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.

B. Nonmetallic Mineral Processing Plant

Jaw Crusher LT120 is a portable unit which was manufactured in 2021 with rated capacity of 595 tons/hr. The nonmetallic mineral processing plant also consists of other equipment associated with Jaw Crusher LT120, such as screens and belt conveyors.

1. BACT Findings

The regulated pollutant from nonmetallic mineral processing plants is particulate matter. To meet the requirements of BPT for control of particulate matter emissions, Shaw Brothers shall maintain water sprays on the nonmetallic mineral processing plant and operate as needed to control visible emissions. Visible emissions from the Jaw

Crusher LT120 shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

The Department has determined that the proposed BACT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101 and 40 C.F.R. Part 60, Subpart OOO. Therefore, the visible emission limit for Jaw Crusher LT120 has been streamlined to the more stringent BACT limit.

## 2. New Source Performance Standards

The federal regulation *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 C.F.R. Part 60, Subpart OOO, applies to equipment at nonmetallic mineral processing plants with capacities greater than 25 ton/hr for fixed plants and 150 ton/hr for portable plants. The requirements of Subpart OOO apply to any crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, or enclosed truck or railcar loading station at a nonmetallic mineral processing plant greater than the sizes listed above which commenced construction, modification, or reconstruction after August 31, 1983.

Jaw Crusher LT120 is part of a nonmetallic mineral processing plant with a maximum capacity of greater than 150 ton/hr and was manufactured after August 31, 1983. This crusher is therefore an affected facility subject to 40 C.F.R. Part 60, Subpart OOO. **Any grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, or enclosed truck or railcar loading station associated with these crushers are also affected facilities subject to 40 C.F.R. Part 60, Subpart OOO.** [40 C.F.R. §§ 60.670(c) and (e)]

### a. Notification

Shaw Brothers shall submit notification to the Department and EPA of the date of initial startup of every affected facility (as listed above) postmarked within 15 days of the startup. This notification shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted. For portable units, this notification shall also include both the home office and the current address or location of the portable plant. [40 C.F.R. § 60.676(i)]

### b. Standards

Subpart OOO, Table 3 contains applicable visible emission requirements for affected facilities.

Visible emissions from Jaw Crusher LT120 shall not exceed 12% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]

Visible emissions from any affected facility other than rock crushers, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction before April 22, 2008, shall not exceed 10% opacity on a six-minute block average basis.  
[40 C.F.R. Part 60, Subpart OOO, Table 3]

Visible emissions from any affected facility other than rock crushers, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction on or after April 22, 2008, shall not exceed 7% opacity on a six-minute block average basis.  
[40 C.F.R. Part 60, Subpart OOO, Table 3]

c. Monitoring Requirements

Shaw Brothers shall maintain records detailing the maintenance on particulate matter control equipment including spray nozzles. Shaw Brothers shall perform monthly inspections of any water sprays to ensure water is flowing to the correct locations and initiate corrective action within 24 hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required shall be included in the maintenance records. The maintenance records shall be kept on-site at the rock crushing location.  
[40 C.F.R. §§ 60.674(b) and 60.676(b)(1)]

d. Testing Requirements

Subpart OOO, § 60.675 requires that Shaw Brothers conduct an initial performance test for visible emissions from Jaw Crusher LT120 and from all associated affected facilities subject to Subpart OOO, potentially including **any associated grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station associated with Jaw Crusher LT120.**

Testing shall be completed in accordance with the following:

- (1) An initial performance test shall be completed within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a facility falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment.  
[40 C.F.R. §§ 60.672(b) and 60.675(i)]

- (2) Each performance test shall be done using the methods set forth in 40 C.F.R. Part 60, Subpart OOO, § 60.675. [40 C.F.R. § 60.675(c)]
- (3) Shaw Brothers shall submit a test notice to the Department at least seven days prior to conducting a performance test. [40 C.F.R. § 60.675(g)]

Please note, although Shaw Brothers may submit notifications and conduct performance testing for multiple affected facilities as a group, any new affected facility subsequently brought on-site to replace or operate in conjunction with an affected facility must also comply with all applicable requirements of 40 C.F.R. Part 60, Subpart OOO including notification and testing requirements.

C. Diesel #13

Diesel #13 is a portable engine used to power and propel the LT120 crusher. Diesel #13 has a maximum capacity of 2.4 MMBtu/hr firing distillate fuel. Diesel #13 was manufactured in 2021 and is a Cat Engine Model C9.3B. The fuel fired in Diesel #13 shall be included in the existing facility-wide limit of 75,000 gallons/year on a calendar year total basis of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). This fuel limit shall apply regardless of where the units are operated.

1. BACT Findings

The BACT emission limits for Diesel #13 were based on the following:

- PM, PM<sub>10</sub> - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
- 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> - 3.2 lb/MMBtu from AP-42, Table 3.3-1 dated 10/96
- CO - 0.85 lb/MMBtu from AP-42, Table 3.3-1 dated 10/96
- VOC - 0.09 lb/MMBtu from AP-42, Table 3.3-1 dated 10/96
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Diesel #13 is the following:

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 #13	0.29	0.29	0.01	10.58	2.28	0.84

Visible emissions from Diesel #13 shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards

Diesel #13 is not subject to *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart III.

The definition in 40 C.F.R. § 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including: “Portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.” The regulation further states at 40 C.F.R. § 1068.30 that an engine is not a non-road engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road engine and is subject to applicable stationary engine requirements. [40 C.F.R. § 60.4200]

Diesel #13 is considered a non-road engine, as opposed to a stationary engine, since Diesel #13 is portable and will be moved to various sites within the facility.

3. National Emission Standards for Hazardous Air Pollutants

Diesel #13 is not subject to *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ.

The definition in 40 C.F.R. § 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including “Portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.” The regulation further states at 40 C.F.R. § 1068.30 that an engine is not a non-road engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road engine and is subject to applicable stationary engine requirements. [40 C.F.R. § 63.6585]

Diesel #13 is considered a non-road engine, as opposed to a stationary engine, since Diesel #13 is portable and will be moved to various sites within the facility.

D. Annual Emissions

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

**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-425-71-R-A, 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, A-425-71-P-M, A-425-71-Q-A; 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 shall replace Specific Condition (16)(A) of Air Emission License A-425-71-Q-M.**

(16) Nonmetallic Mineral Processing Plants

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, LT125, Pioneer 3042, LT106 #1, LT106 #2, Telsmith 4448, and LT120; 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 all 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 shall replace Specific Condition (16)(H) of Air Emission License A-425-71-Q-M.**

(16) Nonmetallic Mineral Processing Plants

H. NSPS Subpart OOO Requirements

Shaw Brothers shall comply with all requirements of 40 C.F.R. Part 60, Subpart OOO applicable to Jaw Crushers LT125 and LT120, and Cone Crushers HP300, LT300, and FT200 and each associated affected facility including any grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station.

1. Shaw Brothers shall submit a notification to the Department and EPA of the date of initial startup of any affected facility postmarked within 15 days of the startup. This notification shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted. For portable units, this notification shall also include both the home office and the current address or location of the portable plant. [40 C.F.R. § 60.676(i)]
2. Visible emissions from Jaw Crusher LT125, and Cone Crushers HP300, LT300, and FT200 shall not exceed 15% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
3. Visible emissions from Jaw Crusher LT120 shall not exceed 12% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
4. Visible emissions from any affected facility other than rock crushers, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction before April 22, 2008, shall not exceed 10% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
5. Visible emissions from any affected facility other than rock crushers, including transfer points on belt conveyors, portable screens, etc., which commenced construction, modification, or reconstruction on or after April 22, 2008, shall not exceed 7% opacity on a six-minute block average basis. [40 C.F.R. Part 60, Subpart OOO, Table 3]
6. Shaw Brothers shall maintain records detailing the maintenance on particulate matter control equipment including spray nozzles. Shaw Brothers shall perform monthly inspections of any water sprays to ensure water is flowing to the correct

locations and initiate corrective action within 24 hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required shall be included in the maintenance records. The maintenance records shall be kept on-site at the rock crushing location.

[40 C.F.R. §§ 60.674(b) and 60.676(b)(1)]

7. An initial performance test shall be completed on Jaw Crusher LT120 in accordance with the applicable sections of 40 C.F.R. § 60.675. The performance test shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a unit falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment.  
[40 C.F.R. §§ 60.672(b) and 60.675(i)]
8. An initial performance test shall be completed on any affected facilities operated with a rock crusher subject to 40 C.F.R. Part 60, Subpart OOO in accordance with the applicable sections of 40 C.F.R. § 60.675. This potentially includes each associated grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station. The performance test shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a unit falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment.  
[40 C.F.R. §§ 60.672(b) and 60.675(i)]
9. Shaw Brothers shall submit a test notice to the Department at least seven days prior to conducting a performance test.  
[06-096 C.M.R. ch. 115, BPT/BACT and 40 C.F.R. § 60.675(g)]
10. For the rock crushers and ancillary equipment subject to 40 C.F.R. Part 60 Subparts A and OOO, Shaw Brothers shall comply with the notification and recordkeeping requirements of 40 C.F.R. §§ 60.676 and 60.7, except for § 60.7(a)(2) pursuant to § 60.676(h). [40 C.F.R. §§ 60.676(b), (f), and (i)]

The following condition shall replace Specific Condition (17)(A)(1) of Air Emission License A-425-71-Q-M.

(17) Portable Diesel Generators

A. Fuel Use

1. Diesels #1, #3, #7, #9, #10, #11, #12, and #13 are 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, BACT/BPT]

The following condition shall replace Specific Conditions (17)(C) and (D) of Air Emission License A-425-71-Q-M.

(17) Portable Diesel Generators

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

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 #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
Diesel #13 – CAT C9.3B	0.29	0.29	0.01	10.58	2.28	0.84

D. Visible Emissions

Visible emissions from Diesels #1, #3, #7, 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.

**The following are new Specific Conditions of Air Emission License A-425-71-L-R/M.**

(17) Portable Diesel Generators

F. Visible Emissions

Visible emissions from Diesel #13 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

- (23) If the Department determines that any parameter value pertaining to construction and operation of the proposed emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Shaw Brothers may be required to submit additional information. Upon written request from the Department, Shaw Brothers shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

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

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**Departmental**  
**Findings of Fact and Order**  
**Air Emission License**  
**Amendment #5**

(24) Performance Test Protocol

For any performance testing required by this license, Shaw Brothers shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 16<sup>th</sup> DAY OF JUNE, 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, 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: 4/29/22

Date of application acceptance: 5/3/22

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

