A. H. Grover, Inc.
Cumberland County
Gray, Maine
A-751-71-D-R/A

Departmental
Findings of Fact and Order
Air Emission License
Renewal/Amendment

FINDINGS OF FACT

After review of the air emission license renewal and 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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

1. A. H. Grover, Inc. (AHG), located in Cumberland, Maine has applied to renew their Air Emission License, permitting the operation of their crushed stone and gravel facility.

2. AHG has also requested their license be amended by removing the Extec Crusher, and adding the KPI crusher, and adding two existing generators inadvertently omitted from the previous license.

3. The main office is located at 109 Shaker Road, Gray, ME.

B. Emission Equipment

Rock Crushers

Designation	Powered	Process Rate (tons/hour)	Date of Manu-facture	Control Device
Jaw Crusher	**John Deere Generator**	75	1994	Spray Nozzles
Cone Crusher	electric	75	1968	Spray Nozzles
KPI Crusher	**Catepillar C9 Gener.**	**150**	**2013**	**Spray Nozzles**

Generator Units

Source ID	Max. Capacity (MMBtu/hr)	Max. Firing Rate (gallons/hour)	Fuel Type
John Deere Gener.	**1.57**	**11.46**	**distillate fuel, 0.0015% S**
Catepillar C9 Gener.	**2.10**	**15.33**	**distillate fuel, 0.0015% S**
Generator #4	0.6	4.5	distillate fuel, 0.0015% S

C. Application Classification

The application for AHG includes the licensing of increased emissions and the installation of new or modified equipment, therefore the license is considered to be both a renewal and an amendment of current air emission license per *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended).

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels (TPY)
PM	0.2	0.2	0.0	100
PM_{10}	0.2	0.2	0.0	100
SO_2	0.1	0.7	0.6*	100
NO_x	6.0	6.0	0.0	100
CO	1.3	1.3	0.0	100
VOC	0.5	0.5	0.0	50
CO_2e	-	<100,000	<100,000	100,000

* This change results from using distillate fuel with a maximum sulfur content of 0.5% to calculate emissions. Diesel fuel with a sulfur content of 0.0015% was used previously.

This modification is determined to be a minor modification 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 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.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 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. Rock Crushers

The Jaw, Cone and KPI rock crushers are portable units manufactured in 1994, 1968 and 2013, respectively with rated capacities of 75, 75, and 150 tons per hour, respectively.

The Jaw, Cone and KPI rock crushers are ***not*** subject to EPA New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart OOO for Nonmetallic Mineral Processing Plants manufactured after August 31, 1983, with capacities greater than 150 tons per hour for portable plants and greater than 25 tons per hour for non-portable plants based on the size of the crushers.

The regulated pollutant from the rock crushers is particulate emissions. To meet the requirements of Best Practical Treatment (BPT) for control of particulate matter (PM) emissions from the rock crushers, AHG shall maintain water sprays on the rock crushers and operate as needed to control visible emissions. Visible emissions from the rock crushers shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

C. Generators

AHG operates three generators: Generator #4, the John Deere Generator, and the Caterpillar Generator. The John Deere powers the #1 Jaw Crusher; the Caterpillar powers the KPI Crusher. The fuel fired in the three generators shall be limited to 20,000 gallons per year, on a calendar year basis, of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur).

Generator #4 has a maximum capacity of 0.6 MMBtu/hr firing distillate fuel. The generator was manufactured in 1995; the John Deere has a maximum capacity of 1.57 MMBtu/hour firing distillate fuel and was manufactured in 1994. Generator #4 and the John Deere Generator were manufactured prior to April 1, 2006, therefore, are not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

The Caterpillar Generator has a maximum capacity of 2.10 MMBtu/hr firing distillate fuel, and was manufactured in 2013. The Caterpillar Generator is considered a non-road engine, as opposed to stationary engine, since it is portable and will be moved to various sites with the crushers. Therefore, the Caterpillar generator is not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

Generator #4, the John Deere Generator and the Caterpillar Generator are considered non-road engines, as opposed to stationary engines, since Generator #4, the John Deere Generator and the Caterpillar Generator are portable. Therefore, Generator #4, the John Deere Generator and the Caterpillar Generator are not subject to 40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.* The definition in 40 CFR Part 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." 40 CFR Part 1068.30 further states 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 a shorter period of time for an engine located at a seasonal source. An engine located at a seasonal source (a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year) is an engine that remains at a seasonal source during the full annual operating period of the seasonal source.

The BPT emission limits for Generator #4, the John Deere Generator and the Caterpillar Generator were based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 CMR 103
SO_2	- combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
NO_x	- 4.41 lb/MMBtu from AP-42 dated 10/96
CO	- 0.95 lb/MMBtu from AP-42 dated 10/96
VOC	- 0.35 lb/MMBtu from AP-42 dated 10/96
Opacity	- 06-096 CMR 101

The BPT emission limits for the three generators are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
John Deere Generator	0.19	0.19	0.81	6.92	1.49	0.55
Caterpillar Generator	0.25	0.25	1.08	9.26	2.00	0.74
Generator #4	0.07	0.07	0.31	2.65	0.57	0.21

Visible emissions from each of the three generators shall not exceed 20% opacity on a six (6)-minute block average, except for no more than two (2), six (6)-minute block averages in a three (3)-hour period.

D. Stock Piles and Roadways

Visible emissions from a fugitive emission source shall not exceed 20% opacity, except for no more than five (5) minutes in any one (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 (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed 20% opacity on a six (6)-minute block average basis except for no more than one (1), six (6)-minute block average in a one (1)-hour period.

F. Facility Emissions

1. AHG shall be restricted to the following annual emissions, based on a calendar year, and a facility fuel limit of 20,000 gallons of distillate fuel.

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Facility Limit	0.2	0.2	0.7	6.0	1.3	0.5
Total TPY	**0.2**	**0.2**	**0.7**	**6.0**	**1.3**	**0.5**

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 (CO_2 e).

Based on the facility's fuel use limit, 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, AHG is below the major source threshold of 100,000 tons of CO_2e 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 renewal source shall be determined on a case-by case basis. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

Pollutant	Tons/Year
PM_{10}	25
SO_2	50
NO_x	50
CO	250

Based on the total facility licensed emissions, AHG is below the emissions level required for modeling.

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-751-71-D-R/A, 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) **Rock Crushers**

A. AHG shall install and maintain spray nozzles for particulate control on the Jaw Crusher, the Cone Crusher and the KPI Crusher and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six (6)-minute block average basis. [06-096 CMR 115, BPT and 06-096 CMR 101]

B. AHG shall maintain a log detailing and quantifying the hours of operation on a daily basis for each of the three rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

C. AHG shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). AHG 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 log. The maintenance log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

D. AHG shall either have an initial performance test performed on the KPI Crusher per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675 or provide documentation to the Department that the initial performance test was previously performed. (Documentation that a successful initial performance test was performed outside of Maine may be accepted.) [06-096 CMR 115, BPT]

E. An initial performance test must 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. [06-096 CMR 115, BPT]

F. AHG shall submit a test notice to the regional inspector at least 7 days prior to conducting a performance test. [06-096 CMR 115, BPT]

G. The crushers 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 CMR 115, BPT]

(17) **Generators**

A. Fuel Use

1. The three generators - Generator #4, and the John Deere and the Caterpillar Generators - shall fire only distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur). [06-096 CMR 115, BACT]
2. Total fuel use for the three generators combined shall not exceed 20,000 gallons per year 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 calendar year basis. [06-096 CMR 115, BPT]

B. 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)
John Deere Generator	0.19	0.19	0.81	6.92	1.49	0.55
Caterpillar Generator	0.25	0.25	1.08	9.26	2.00	0.74
Generator #4	0.07	0.07	0.31	2.65	0.57	0.21

C. Visible emissions from each of the three generators shall not exceed 20% opacity on a six (6)-minute block average, except for no more than two (2), six (6)-minute block averages in a continuous three (3)-hour period. [06-096 CMR 101]

(18) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed 20% opacity, except for no more than five (5) minutes in any one (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]

(19) **General Process Sources**

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed 20% opacity on a six (6)-minute block average basis except for no more than one (1), six (6)-minute block average in a one (1)-hour period. [06-096 CMR 115, BPT]

(20) **Equipment Relocation** [06-096 CMR 115, BPT]

A. AHG shall notify the Bureau of Air Quality, by a written notification, prior to relocation of any equipment carried on this license. It is preferred for notice of relocation to be submitted through the Department's on-line e-notice at:

www.maine.gov/dep/air/compliance/forms/relocation

Written notice may also be sent by fax (207-287-7641) or mail. Notification sent by mail shall be sent to the address below:

Attn: Relocation Notice
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

The notification shall include the address of the equipment's new location, an identification of the equipment and the license number pertaining to the relocated equipment.

B. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.

(21) AHG shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [06-096 CMR 115, BPT]

(22) AHG 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 17 DAY OF March , 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, 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 MRSA §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: 04/23/2014
Date of application acceptance: 04/24/2014

Date filed with the Board of Environmental Protection:

This Order prepared by N. Lynn Cornfield, PE, Bureau of Air Quality.

Filed
MAR 18 2015
State of Maine
Board of Environmental Protection