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GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PATRICIA W. AHO
COMMISSIONER

**George C. Hall & Sons Inc.
Knox County
Rockland, Maine
A-683-71-E-N**

**Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact Renewal**

After review of the air emissions license renewal 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

The Air Emission License for George C. Hall & Sons, Inc. (GHS), located in Rockland, Maine expired on May 25, 2012. GHS has applied to renew their expired license permitting the operation of emission sources associated with their crushed stone and gravel facility.

The GHS main office is located at 190 Pleasant Street, Rockland, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Rock Crushers

Equipment	Power Source	Process Rate (tons/hr)	Control Device	Date of Manufacture
Jaw Crusher	Diesel Engine	170	Spray Nozzles	1996
Cone Crusher	Diesel Engine	170	Spray Nozzles	1998

Diesel Engine

Equipment	Fuel Type	Maximum Firing Rate (gallons/hour)	Maximum Output (kW)	Date of Manufacture
CATGen	Diesel, 0.0015%S	37.0	500	1998

C. Application Classification

The previous air emission license for GHS expired on May 25, 2012. A complete application was not submitted prior to the expiration date, therefore GHS is considered to be an existing source applying for an after-the-fact renewal. 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).

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 an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per 06-096 CMR 115 (as amended).

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

GHS operates two portable rock crushers at their facility: a jaw crusher and a cone crusher. The jaw and cone crushers each have a rated capacity of 170 tons/hour and were manufactured in 1996 and 1998, respectively.

Based on their maximum capacities and dates of manufacture, the jaw and cone crushers are 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/hour for portable plants and greater than 25 tons/hour for non-portable plants. The performance testing required by Subpart OOO was successfully conducted on October 11, 2002.

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

C. Diesel Engine

GHS operates one diesel engine, designated CATGen, as the power source for the jaw and cone crushers. The CATGen engine is rated at 500kW output, was manufactured in 1998 and has a maximum design firing rate of 37.0 gallons/hour.

The CATGen engine was manufactured prior to April 1, 2006. Therefore, it is not subject to New Source Performance Standards 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

The CATGen engine is considered to be a non-road engine, as opposed to stationary engine, since it is portable and will be moved to various sites. Therefore, the CATGen engine is 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 twelve 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 the CATGen engine were based on the following:

SO ₂	0.0015 lb/MMBTU, based 0.0015% sulfur diesel fuel
PM	0.12 lb/MMBTU, 06-096 CMR 103, BPT
NO _x	3.2 lb/MMBTU, AP-42, Table 3.4-1 (10/96)
CO	0.85 lb/MMBTU, AP-42, Table 3.4-1 (10/96)
VOC	0.09 lb/MMBTU, AP-42, Table 3.4-1 (10/96)

Opacity Visible emissions from the CATGen engine shall not exceed 20% opacity on a six-minute block average except for no more than two six-minute block averages in a three-hour period.

The BPT emission limits for the CATGen engine are as follows:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
CATGen	0.6	0.6	0.1	15.6	4.2	0.4

GHS shall be limited to firing no greater than 40,000 gallons/year of diesel fuel in the CATGen engine, on a calendar-year basis, with a sulfur content of no greater than 0.0015% (15ppm) sulfur by weight.

GHS shall maintain a record of fuel use, which shall include fuel purchase receipts indicating the quantity and date of fuel purchased. The fuel-use records shall be maintained on a monthly as well as on a calendar-year basis.

D. Stock Piles and Roadways

Visible emissions from any fugitive emission source shall not exceed an opacity of 20%, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour.

E. General Process Emissions

Visible emissions from any general process (including conveyor belts, transfer points, etc.) associated with the jaw and cone crushers shall not exceed an opacity of 7% on a six-minute block average basis.

Visible emissions from any other general process (belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed an opacity of 20% opacity on a six-minute block average basis except for no more than one six-minute block average in a one-hour period.

F. Annual Emissions

1. GHS shall be restricted to the following annual emissions, on a calendar-year basis:

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

Equipment	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
CATGen	0.3	0.3	0.1	8.8	2.3	0.3
Total TPY	0.3	0.3	0.1	8.8	2.3	0.3

The tons per year limits were calculated based on the annual fuel limit of 40,000 gallons/year of 0.0015% (15ppm) sulfur diesel fuel, on a calendar-year basis.

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 (CO₂ e).

Based on GHS's annual 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, GHS is below the major source threshold of 100,000 tons of CO₂ e 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	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the total facility licensed emissions, GHS 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 BPT,
- 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-683-71-E-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 months after receipt of such approval or if construction is discontinued for a period of eighteen 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 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 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 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 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. GHS shall maintain water spray nozzles for particulate control on the jaw and cone crushers and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six-minute block average basis. [06-096 CMR 115 (BPT) and 06-096 CMR 101]
- B. GHS shall maintain a log detailing and quantifying the hours of operation on a daily basis for the jaw and cone crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]
- C. GHS shall maintain a log detailing the maintenance on particulate matter control equipment (including water spray nozzles). GHS shall perform monthly inspections of any water sprays to ensure water is flowing to the correct locations and initiate corrective action within twenty-four hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required will 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. The jaw and cone crushers are subject to 40 CFR Part 60 Subparts A and OOO. GHS shall comply with the notification and recordkeeping requirements of 40 CFR Part 60.676 and Part 60.7, except for Section (a)(2) of 60.7 per Subpart OOO, §60.676(h).

(17) **CATGen Diesel Engine**

- A. GHS shall be limited to firing no greater than 40,000 gallons/year of diesel fuel in the CATGen engine, on a calendar-year basis, with a sulfur content of no greater than 0.0015% (15ppm) sulfur by weight, [06-096 CMR 115, BPT]
- B. Emissions from the CATGen engine shall not exceed the following [06-096 CMR 115, BPT]:

Equipment	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
CATGen	0.6	0.6	0.1	15.6	4.2	0.4

- C. GHS shall maintain a record of fuel use, which shall include fuel purchase receipts indicating the quantity, date and the sulfur content of the fuel purchased. The fuel-use records shall be maintained on a monthly as well as on a calendar year basis. [06-096 CMR 115, BPT]
- D. Visible emissions from CATGen shall not exceed 20% opacity on a six-minute block average except for no more than two six-minute block averages in a three-hour period. [06-096 CMR 115, BPT]

(18) **Stockpiles and Roadways**

Visible emissions from any fugitive emission source shall not exceed an opacity of 20%, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour. [06-096 CMR 101]

(19) **General Process Emissions**

Visible emissions from any general process (including conveyor belts, transfer points, etc.) associated with the jaw and cone crushers shall not exceed an opacity of 7% on a six-minute block average basis.

Visible emissions from any other general process (belts, bucket elevators, bagging operations, truck loading operations, etc.) shall not exceed an opacity of 20% opacity on a six-minute block average basis except for no more than one six-minute block average in a one-hour period.

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

- A. GHS shall notify the Bureau of Air Quality, by a written notification prior to relocation of any equipment carried on this license. Written notice may be sent by mail, facsimile (fax), or e-mail. Notification sent by mail shall be sent to the address below or to a Department Regional Office:

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

George C. Hall & Sons Inc.
Knox County
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Equipment relocation notification can also be done on-line with e-notice at www.maine.gov/dep/air/compliance/forms/relocation.

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) GHS 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) GHS 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-C].

DONE AND DATED IN AUGUSTA, MAINE THIS 20 DAY OF December, 2012.

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, 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: May 29, 2012

Date of application acceptance: May 30, 2012

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J. Ostrowski, Bureau of Air Quality.



