



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PATRICIA W. AHO  
COMMISSIONER

**K & K Excavation, Inc.**  
**Androscoggin County**  
**Turner, Maine**  
**A-692-71-F-N (SM)**

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

**FINDINGS OF FACT**

After review of the air emission license renewal 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 (the Department) finds the following facts:

**I. REGISTRATION**

A. Introduction

The Air Emission License for K & K Excavation, Inc. (K&K) of Turner, Maine expired on February 27, 2012. K&K has applied to renew their expired license permitting the operation of the portable equipment associated with their crushed stone and gravel facility. The main office is located at 302B Auburn Road, Turner, Maine.

B. Emission Equipment

**Rock Crushers**

<u>Designation</u>	<u>Common Name</u>	<u>Powered By...</u>	<u>Process Rate (tons/hour)</u>	<u>Date of Manufacture</u>	<u>Control Device</u>
#1 Primary Crusher	Jaws	Diesel #1	125	1990	Water Sprays
#1 Secondary Crusher	JCI Cone		125	1999	
#2 Secondary Crusher	Kodiak Cone	Diesel #2	200	2003	
#3 Secondary Crusher	ELJ		200	1990	
#4 Secondary Crusher	Pioneer		125	2003	

**Generator Units**

<u>Source ID</u>	<u>Common Name</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Power Output</u>	<u>Fuel Type</u>
Diesel 1	Big Cat	5.85	42.7	600 kW	diesel fuel, 0.0015% sulfur
Diesel 2	Komatsu/Multi	3.9	28.5	400kW	
Diesel 3 (back-up)	New Cat	3.9	28.5	400 kW	
Diesel 4 (back-up)	Small Cat	2.4	17.5	250 kW	

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
RAY BLDG., HOSPITAL ST.

BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769  
(207) 764-0477 FAX: (207) 760-3143

C. Application Classification

The previous air emission license for K&K expired on February 27, 2012. A complete application was not submitted prior to the expiration date; therefore, K&K is considered to be an existing source applying for an after-the-fact license renewal. The facility is determined to be a minor stationary source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With the fuel limit on the diesel generators, the facility is licensed below the major source thresholds and is considered a synthetic minor.

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 (BACT) analysis per 06-096 CMR 115 (as amended).

B. Rock Crushers

The primary rock crusher and four secondary rock crushers are portable units. Each crusher's process rate capacity and date of manufacture are as follows:

	<i>Process Rate (tons/hour)</i>	<i>Date of Manufacture</i>
#1 Primary Crusher	125	1990
#1 Secondary Crusher	125	1999
#2 Secondary Crusher	200	2003
#3 Secondary Crusher	200	1990
#4 Secondary Crusher	125	2003

Because of the sizes of the #1 Primary, #1 Secondary, and #4 Secondary Crushers, these units 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/hour for portable plants and greater than 25 tons/hour for non-portable plants.

The #2 Secondary Crusher and the #3 Secondary Crusher are Subject to NSPS 40 CFR Part 60, Subpart OOO because they were manufactured after August 31, 1983, and they have capacities greater than the 150 tons/hour applicability

threshold for portable plants. As a requirement of NSPS Subpart OOO, initial performance tests were conducted on the #2 Secondary Crusher and the #3 Secondary Crusher in October of 2005.

The regulated pollutant from the rock crushers is particulate emissions. To meet the requirements of BACT/BPT for control of particulate matter (PM) emissions from the rock crushers, K&K 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-minute block average basis.

C. Generators

The diesel engines used to power the rock crushers are portable units. The maximum capacity and date of manufacture for each are as follows:

	<i>Max. Capacity (MMBtu/hour)</i>	<i>Power Output</i>	<i>Date of Manufacture</i>
Diesel 1	5.85	600 kW 834 hp	1999
Diesel 2	3.9	400kW 556 hp	2006
Diesel 3 (back-up)	3.9	400kW 556 hp	1999
Diesel 4 (back-up)	2.4	250 kW 347.5 hp	2008

K&K is licensed to fire up to a total of 80,000 gallons per year of diesel fuel in the facility's diesel units, on a 12-month rolling total basis. Diesel fuel fired shall have a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). Compliance with this fuel use restriction shall be demonstrated through fuel receipts from the supplier showing the quantity of fuel delivered and supplier certification indicating the fuel is on-road diesel. Fuel use records shall be maintained on both a monthly basis and a twelve-month rolling total basis.

The four diesel engines are not subject to NSPS 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, because they are portable units.

Engines identified as Diesel 1, Diesel 2, Diesel 3, and Diesel 4 are considered non-road engines, as opposed to stationary engines, since these units are portable and may be moved to various sites with the rock crushers. Therefore, these units 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 §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 §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 BACT/BPT emission limits for the generators were based on the following:

PM, PM <sub>10</sub>	- 0.12 lb/MMBtu; 06-096 CMR 103 (2)(B)(1)(a)	
SO <sub>2</sub>	- 0.0015 lb/MMBtu, based on the combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)	
	<u>Diesel 1 (&gt; 600 hp)</u>	<u>Diesels 2, 3, and 4 (&lt; 600 hp)</u>
NO <sub>x</sub>	- 3.2 lb/MMBtu AP-42 dated 10/96, Table 3.4-1	- 4.41 lb/MMBtu AP-42 dated 10/96, Table 3.3-1
CO	- 0.85 lb/MMBtu AP-42 dated 10/96, Table 3.4-1	- 0.95 lb/MMBtu AP-42 dated 10/96, Table 3.3-1
VOC	- 0.09 lb/MMBtu AP-42 dated 10/96, Table 3.4-1	- 0.36 lb/MMBtu AP-42 dated 10/96, Table 3.3-1
Visible Emissions	- 06-096 CMR 101 (2)(B)(1)(d)	

The BACT/BPT emission limits for the generators are the following:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Diesel 1 (5.85 MMBtu/hr)	0.70	0.70	0.01	18.72	4.97	0.53
Diesel 2 (3.9 MMBtu/hr)	0.47	0.47	0.006	17.20	3.71	1.40
Diesel 3 (3.9 MMBtu/hr)	0.47	0.47	0.006	17.20	3.71	1.40
Diesel 4 (2.4 MMBtu/hr)	0.29	0.29	0.004	10.58	2.28	0.86

Visible emissions from each diesel generator 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.

**D. Stock Piles and Roadways**

Visible emissions from a 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 15-second opacity observations which exceed 20% in any one hour.

E. General Process Emissions

Visible emissions from any general process such as non-NSPS crusher conveyor 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. Facility Emissions

1. K&K shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on 80,000 gallons of diesel fuel at 0.0015% sulfur by weight and the worst case emission rate for the diesel units.

**Total Licensed Annual Emissions for the Facility**

**Tons/year**

(used to calculate the annual license fee)

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Diesels 1, 2, 3, and 4	0.7	0.7	0.1	24.2	5.2	2.0
<b>Total TPY</b>	<b>0.7</b>	<b>0.7</b>	<b>0.1</b>	<b>24.2</b>	<b>5.2</b>	<b>2.0</b>

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), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>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; K&K is below the major source threshold of 100,000 tons of CO<sub>2</sub>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:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

Based on the total facility licensed emissions, K&K 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-692-71-F-N, subject to 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.

### 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 Clean Air Act (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 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 government 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. K&K shall maintain water spray nozzles for particulate control on all of the facility's rock crushers addressed in this license and operate the water sprays 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. K&K shall maintain a log detailing and quantifying the hours of operation on a daily basis for all primary and secondary rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]
- C. K&K shall maintain a log detailing the maintenance on the water spray nozzles. K&K shall perform monthly inspections of all water sprays to ensure water is flowing to the correct locations, and shall 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. 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]
- E. The #2 Secondary Crusher and the #3 Secondary Crusher are subject to 40 CFR Part 60, Subpart OOO, and K&K shall comply with the notification and record keeping requirements of 40 CFR §60.676 and §60.7 applicable to these units, except for Section (a)(2) of §60.7, per Subpart OOO §60.676(h).

**(17) Portable Generators: Diesel 1, Diesel 2, Diesel 3, and Diesel 4**

**A. Fuel Use**

1. Diesel 1, Diesel 2, Diesel 3, and Diesel 4 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur). [06-096 CMR 115, BACT]

2. Total diesel fuel use for the four diesel generators shall not exceed 80,000 gallons/year on a 12-month rolling total basis. 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 both a monthly and a 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
Diesels 1, 2, 3, and 4	PM	0.12	06-096 CMR 103 (2)(B)(1)(a)

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

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Diesel 1 (5.85 MMBtu/hr)	0.70	0.70	0.01	18.72	4.97	0.53
Diesel 2 (3.9 MMBtu/hr)	0.47	0.47	0.006	17.20	3.71	1.40
Diesel 3 (3.9 MMBtu/hr)	0.47	0.47	0.006	17.20	3.71	1.40
Diesel 4 (2.4 MMBtu/hr)	0.29	0.29	0.004	10.58	2.28	0.86

- D. Visible emissions from each diesel generator 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 101 (2)(B)(1)(d)]

(18) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any one hour. [06-096 CMR 101]

(19) **General Process Sources**

Visible emissions from any general process such as non-NSPS crusher conveyor 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. [06-096 CMR 115, BPT]

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

- A. K&K 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](http://www.maine.gov/dep/air/compliance/forms/relocation)

**K & K Excavation, Inc.  
Androscoggin County  
Turner, Maine  
A-692-71-F-N (SM)**

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

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

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 shall be made to the respective county commissioners.
- (21) K&K shall keep a copy of this Order on site, and make sure the operator(s) are familiar with the terms of this Order. [06-096 CMR 115, BPT]
- (22) K&K 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 January, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Mauro Allen Robert Core for*  
PATRICIA W. AHO, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a renewal application is submitted prior to expiration of this license and is determined by the Department as complete, 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 application for license renewal.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 27, 2013

Date of application acceptance: December 9, 2013

Date filed with the Board of Environmental Protection:

This Order prepared by Jane E. Gilbert, Bureau of Air Quality.

