STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

BETH NAGUSKY
ACTING COMMISSIONER

Berwick Iron & Metal Recycling, Inc.
York County
Berwick, Maine
A-1041-71-A-N (SM)

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license 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

1. Berwick Iron & Metal Recycling, Inc. (Berwick) has applied for an Air Emission License permitting the operation of emission sources associated with their ferrous and non-ferrous metal recycling facility.

2. The equipment addressed in this license is located at 106 Route 236, Berwick ME.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
Diesel Drive Unit	27.4	200	diesel, 0.0015%	1

Process Equipment

Equipment	Production Rate	Pollution Control Equipment
Texas Shredder Model 8104	100 TPH	Water Sprays

C. Application Classification

The new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	1.2	100
PM_{10}	1.2	100
SO_2	0.1	100
NO_x	20.0	100
CO	8.7	100
VOC	0.9	50

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 (last amended December 24, 2005). With the fuel limit on the Diesel Drive Unit, Berwick is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). 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 *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Diesel Drive Unit

The Diesel Drive is a 3600 horsepower, 20-cylinder turbocharged General-Motors Model 20-645-E3 diesel locomotive engine, with a rated fuel input of 200 gallons per hour. The unit is equipped with GM Ecotip fuel injectors which reduce visible emissions, PM, carbon monoxide and volatile organic compound emissions. The Diesel Drive was manufactured in 1967, therefore, it is not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

Because of its size, the Diesel Drive is subject to the provisions 40 CFR Part 63, Subpart ZZZZ, including initial notification. Berwick shall provide to MEDEP a written compliance plan for Subpart ZZZZ prior to April 30, 2013.

A summary of the BACT analysis for the Diesel Drive is the following:

1. Berwick shall be limited to the use of 150,000 gallons per year of Diesel fuel in the Diesel Drive.
2. The Diesel Drive shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
3. The Diesel Drive shall be equipped with Ecotip Injectors, a four pass Intercooler and ignition timing retard.
4. 06-096 CMR 103 regulates PM emission limits. The PM_{10} limits are derived from the PM limits.
5. NO_x emissions shall not exceed 20.0 tons per year based on a calendar year.
6. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
7. Berwick shall operate and maintain the Diesel Drive Unit in accordance with the manufacturer's written instructions. Berwick shall not change settings that are not approved in writing by the manufacturer. Berwick shall keep a copy of the manufacturer's written instructions on-site.
8. Visible emissions from the Diesel Drive shall not exceed 30 percent opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

C. Metal Shredder

The metal shredder is a Texas Shredder Model 8104, with a throughput capacity of 50 – 100 tons per hour, depending on the material being processed.

The potential emissions from the shredder are particulate matter from the physical impact of the shredder hammers on the materials as well as from the potential heating of the material by friction in the shredder. The shredder is equipped with water sprays which shall be used to minimize emissions. The shredder is equipped with an automatic system for controlling operations including the shredder feed rate, feed roll pressure, and engine throttle.

The shredder and the diesel drive unit are coupled with a reduction gear to ensure the shredder and the diesel drive unit both operate at their optimum speed to maximize useable torque and minimize emissions.

Visible emissions from the shredder shall not exceed 20 percent opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

D. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20 percent opacity, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

E. General Process Emissions

Visible emissions from any general process source shall not exceed 20 percent opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

F. Annual Emissions

Berwick shall be restricted to the following annual emissions, based on a 12-month rolling total, and on annual fuel usage of 150,000 gallons of diesel 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
Diesel Drive	1.23	1.23	0.02	20.00	8.73	0.92
Total TPY	**1.2**	**1.2**	**0.1**	**20.0**	**8.7**	**0.9**

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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-1041-71-A-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 (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. [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 emission 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) **Diesel Drive Unit**

A. The Diesel Drive shall fire only diesel fuel with a maximum content not to exceed 15 PPM. [06-096 CMR 115, BACT]
B. Total fuel use for the Diesel Drive shall not exceed 150,000 gallons per year of diesel fuel based on a calendar year. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type of fuel delivered and sulfur content of the fuel. [06-096 CMR 115, BACT]
C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Diesel Drive Unit	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Diesel Drive Unit	3.29	3.29	0.04	52.06	23.29	2.47

E. Actual NOx emissions shall not exceed 20 tons per year, based on a calendar year. [06-096 CMR 115, BPT]
F. The Diesel Drive shall be equipped with Ecotip Injectors, a four pass Intercooler and ignition timing retard. [BPT]
G. Berwick shall operate and maintain the Diesel Drive Unit in accordance with the manufacturer's written instructions. Berwick shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]
H. Visible emissions from the Diesel Drive shall not exceed 30 percent opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]
I. Berwick shall provide to MEDEP a written compliance plan for 40 CFR Part 60, Subpart ZZZZ, prior to April 30, 2013.

(17) **Metal Shredder**

A. Berwick shall operate the water sprays at all times the shredder is in operation.
B. Visible emissions from the metal shredder shall not exceed 20 percent opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

(18) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed of 20 percent opacity, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [06-096 CMR 101]

(19) **Performance Test**

Berwick shall perform an initial performance test within 60 days after achieving the maximum production rate at which the facility shall be operated, but not later than 180 days after initial start-up of the facility. The performance test shall consist of Method 9 opacity testing, performed on both the Diesel Drive and the Shredder.

(20) Berwick may construct a common fuel storage tank to service the Diesel Drive and their mobile equipment. The fuel line to the Diesel Drive shall be metered.

(21) Berwick 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 27th DAY OF October, 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Barbagallo
BETH NAGUSKY, ACTING COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 7/27/2010
Date of application acceptance: 7/27/2010

Date filed with the Board of Environmental Protection:

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

FILED
OCT 27 2010
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE