



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

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

Departmental
Findings of Fact and Order
Air Emission License
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 (Department) finds the following facts:

I. REGISTRATION

A. Introduction

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

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

B. Emission Equipment

The following equipment is addressed in this air emission license:

Engines

Equipment	Power Output (HP)	Maximum Heat Input (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.
Diesel Drive Unit	3,600	27.4	200	distillate fuel, 0.0015%	1967

Process Equipment

Equipment	Production Rate	Pollution Control Equipment
Texas Shredder	50-100 ton/hr	Water Sprays

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. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials 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.

D. Application Classification

The application for BIMR does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With the annual fuel limit on the Diesel Drive Unit the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. The facility is also licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

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 (as amended). Separate control requirement categories exist for new and existing equipment.

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. Facility Description

BIMR is a ferrous and non-ferrous metal recycling facility. BIMR operates a "hammer-mill" type shredder (Texas Shredder) powered by a diesel engine (Diesel Drive Unit). The shredder is used to process large metal objects, such as crushed cars, to reduce the metal to a nominal six inch size. The shredded metal is divided into ferrous and non-ferrous components using a large eddy current electromagnet. All ferrous and non-ferrous materials are sold and shipped off-site for further processing.

C. Diesel Drive Unit

BIMR operates the Diesel Drive Unit to provide prime operating power to drive the Texas Shredder. The Diesel Drive Unit is a 20-cylinder turbocharged General Motors Model 20-645-E3 diesel locomotive engine. It has a maximum heat input of 27.4 MMBtu/hr, power output of 3,600 Hp, and fires distillate fuel. The Diesel Drive Unit was manufactured in 1967 and installed in 2010.

The Diesel Drive Unit is equipped with GM Ecotip fuel injectors which are designed to improve the fuel input pattern and improve fuel efficiency. These injectors reduce visible emissions as well as emissions of PM, CO, and VOC compared to standard injectors. This improves the ability for retarding the timing in order to reduce NO_x emissions.

The Diesel Drive Unit is a turbocharged engine. It uses a turbine in the exhaust stream to power a separate compressor turbine in the air intake manifold. This increases the combustion air pressure, which improves engine performance. However, the adiabatic heating caused by compressing the combustion air has the tendency to increase NO_x emissions. The Diesel Drive Unit is equipped with a four-pass aftercooler following the turbocharger, which cools the compressed air in the airbox. This cooling helps increase the density of the combustion air and improves engine performance while decreasing NO_x formation. The manufacturer has conducted testing showing that the four-pass aftercooler can reduce NO_x emissions by 15% at full load compared to the standard two-pass model.

1. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is not applicable to the Diesel Drive Unit since it was manufactured prior to April 1, 2006.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to the Diesel Drive Unit.

BIMR uses the Diesel Drive Unit to supply non-emergency power to the Texas Shredder. Therefore, the Diesel Drive Unit does not meet the definition of an emergency engine per 40 CFR Part 63, Subpart ZZZZ. The Diesel Drive Unit is classified as an existing, non-emergency, stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of HAP.

Per Subpart ZZZZ, the Diesel Drive Unit is subject to emission limits for CO. BIMR will comply with the option to meet the 23 ppmvd CO at 15% O₂ emission limit or to reduce CO emissions by 70% or more through use of an oxidation catalyst. BIMR

shall demonstrate compliance through a continuous parameter monitoring system (CPMS) instead of the use of a continuous emission monitoring system (CEMS).

a. Operation Requirements

Operating Limitations	
Non-Emergency, non-black start CI stationary RICE >500 HP	<ul style="list-style-type: none"> - Limit concentration of CO in the exhaust to 23 ppmvd at 15% O₂ <u>or</u> reduce CO emissions by 70% or more (Table 2d); - Minimize the engine's time spent at idle and minimize the engine's startup time at startup 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 apply (Table 2d); - Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test (Table 2b); and - Maintain the temperature of the exhaust so that the catalyst inlet temperature is 450°F – 1350°F. (Table 2b)

b. Crankcase Filtration

BIMR shall operate on the Diesel Drive Unit either a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere or an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. [40 CFR §63.6625(g)]

c. Continuous Parameter Monitoring System (CPMS)

- (1) BIMR shall install, operate, and maintain a CPMS on the Diesel Drive Unit.
- (2) BIMR shall monitor the catalyst inlet temperature and reduce this data to 4-hour rolling averages to demonstrate compliance with the limitations on the catalyst inlet temperature range.
- (3) BIMR shall monitor the pressure drop across the catalyst once per month to demonstrate compliance with the operating limit established during the last performance test.
- (4) BIMR shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 CFR §63.6625(b)(1).
- (5) The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that the Diesel Drive Unit is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities.
- (6) The CPMS shall collect data at least once every 15 minutes.
- (7) The minimum tolerance for a CPMS measuring temperature is 5°F (2.8°C) or 1% of the measurement range, whichever is larger.

(8) CPMS audit procedures shall be performed at least annually.
[40 CFR §63.6625(b), §63.6635, and Table 6]

d. Performance Tests

- (1) BIMR was required to conduct an initial performance test in accordance with Table 4 of Subpart ZZZZ. This test was performed on October 28, 2013.
[40 CFR §63.6612(a)]
- (2) BIMR shall perform performance tests every 8,760 hours of operation or 3 years, whichever comes first. (Due to the fuel limit for the Diesel Drive Unit, it is expected the 3 years will always come first.) [40 CFR §63.6640(a), Table 3, and Table 6]
- (3) BIMR shall conduct three separate test runs for each performance test. Each test run must be at least 1 hour, unless otherwise specified. [40 CFR §63.6620(d)]
- (4) During a performance test the facility must establish the pressure drop across the catalyst to be used to demonstrate compliance per the CPMS.
[40 CFR §63.6630(b)]
- (5) If the facility changes the catalyst, BIMR shall reestablish the values of the operating parameters measured during the performance test. In order to reestablish the operating parameters, the facility shall conduct a performance test to demonstrate that the required emission limitation is being met.
[40 CFR §63.6640(b)]

e. Ultra-Low Sulfur Diesel Fuel Requirement

The diesel fuel fired in the Diesel Drive Unit shall not exceed 15 ppm sulfur (0.0015% sulfur) by weight. [40 CFR §63.6604(a)]

f. General Requirement to Minimize Emissions

At all times the facility shall operate and maintain the Diesel Drive Unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.6605(b)]

g. Reporting

BIMR shall submit to EPA all reports required by Subpart ZZZZ including, but not limited to, the following:

- (1) Notification of Intent to conduct a performance test at least 60 days before a performance test is scheduled to begin. [40 CFR §63.6645(g)]
- (2) Semiannual Compliance Reports shall cover the period between January 1 and June 30 or July 1 through December 31 of each year and shall be postmarked by July 31 or January 31 as applicable. The Semiannual Compliance Report shall include the following information:
 - (a) Company name and address;
 - (b) Statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report;

- (c) Date of report and beginning and ending dates of the reporting period;
- (d) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.;
- (e) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period;
- (f) If there were no periods during which the continuous monitoring system (CMS), i.e. CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.; and
- (g) If there were periods of deviation from an emission or operating limitation occurring where the CPMS is used to comply with the emission and operating limitation, the Semiannual Compliance Report shall also include the following information:
 - i. The date and time that each malfunction started and stopped;
 - ii. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
 - iii. The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8);
 - iv. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
 - v. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
 - vi. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, or other known causes, and other unknown causes;
 - vii. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the Diesel Drive Unit during that reporting period;
 - viii. An identification of each parameter and pollutant that was monitored;
 - ix. A brief description of stationary RICE (Diesel Drive Unit);
 - x. A brief description of the CMS;
 - xi. The date of the last CMS certification or audit; and

xii. A description of any changes in CMS, processes, or controls since the last reporting period.
 [40 CFR §63.6650 and Table 7]

h. Record Keeping

BIMR shall keep all records required by Subpart ZZZZ including, but not limited to, the following:

- (1) A copy of each notification and report that was submitted to comply with Subpart ZZZZ, including all supporting documentation;
- (2) Records of the occurrence and duration of each malfunction of the engine, pollution control equipment, or monitoring equipment;
- (3) Records of the occurrence and duration of each deviation;
- (4) Records of performance tests and performance evaluations;
- (5) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions taken to restore normal operation;
- (6) Monitoring data from the CPMS; and
- (7) Records of maintenance conducted on the Diesel Drive Unit and control equipment to demonstrate the equipment was operated and maintained according to the maintenance plan.

[40 CFR §63.6655]

3. BPT Findings

The BPT emission limits for the Diesel Drive Unit are based on the following:

- PM/PM₁₀ - 0.12 lb/MMBtu from 06-096 CMR 103
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 1.9 lb/MMBtu from AP-42 dated 10/96 for units with ignition timing retard
- CO - 0.85 lb/MMBtu based from AP-42 dated 10/96
- VOC - 0.09 lb/MMBtu from AP-42 dated 10/96
- Opacity - 06-096 CMR 101

The BPT emission limits for the Diesel Drive Unit are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Diesel Drive Unit	PM	0.12

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Diesel Drive Unit	3.29	3.29	0.04	52.06	23.29	2.47

Visible emissions from the Diesel Drive Unit shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

BIMR shall be limited to the firing of no more than 150,000 gal/year of distillate fuel in the Diesel Drive Unit, based on a calendar year.

D. Texas Shredder

The metal shredder is a Texas Shredder model 8104. It has a processing capacity of 50-100 tons per hour depending on the material being processed. The shredder is equipped with an automatic system for controlling operations including the shredder feed rate, feed roll pressure, and engine throttle.

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, as needed, to minimize emissions.

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

The shredder is subject to emission limits per 06-096 CMR 105, *General Process Source Particulate Emission Standard*. The limit on visible emissions is determined to be more restrictive than the PM limits contained in this rule.

E. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, 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% in any one (1) hour.

F. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% 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.

G. Annual Emissions

1. Total Annual Emissions

BIMR shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on firing 150,000 gallons per year of distillate fuel in the Diesel Drive Unit.

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Diesel Drive Unit	1.2	1.2	0.1	19.6	8.7	0.9
Total TPY	1.2	1.2	0.1	19.6	8.7	0.9

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 (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility’s fuel use limit;
- worst case emission factors from the following sources: U.S. EPA’s AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

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, and
- 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-C-R 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-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) Diesel Drive Unit

- A. Total fuel use for the Diesel Drive Unit shall not exceed 150,000 gal/yr of distillate fuel, based on a calendar year total basis. [06-096 CMR 115, BPT]
- B. The fuel oil sulfur content for the Diesel Drive Unit shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BPT and 40 CFR §63.6604(a)]
- C. The Diesel Drive Unit shall be equipped with, operate, and maintain Ecotip Injectors, a four pass intercooler, and ignition timing retard. [06-096 CMR 115, BPT]
- D. Emissions shall not exceed the following:

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

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

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Diesel Drive Unit	3.29	3.29	0.04	52.06	23.29	2.47

- F. Visible emissions from the Diesel Drive Unit shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]

G. Requirements of 40 CFR Part 63, Subpart ZZZZ for the Diesel Drive Unit
[Incorporated under 06-096 CMR 115, BPT]

1. BIMR shall meet the following operational limitations for the Diesel Drive Unit:
 - a. Limit the concentration of CO in the exhaust to 23 ppmvd at 15% O₂ or Reduce CO emissions by 70% or more;
 - b. Minimize the engine's time spent at idle and minimize the engine's startup time at startup 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 apply;
 - c. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the last performance test; and
 - d. Maintain the temperature of the exhaust so that the catalyst inlet temperature is 450°F – 1350°F.

[40 CFR §63.6603(a), Table 2(b), Table 2(d) and 06-096 CMR 115, BPT]

2. Crankcase Filtration

BIMR shall operate on the Diesel Drive Unit either a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere or an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. [40 CFR §63.6625(g)(2) and 06-096 CMR 115, BPT]

3. Continuous Parameter Monitoring System (CPMS)

- a. BIMR shall install, operate, and maintain a CPMS on the Diesel Drive Unit.
- b. BIMR shall monitor the catalyst inlet temperature and reduce this data to 4-hour rolling averages to demonstrate compliance with the limitations on the catalyst inlet temperature range.
- c. BIMR shall monitor the pressure drop across the catalyst once per month to demonstrate compliance with the operating limit established during the last performance test.
- d. BIMR shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 CFR §63.6625(b)(1).
- e. The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that the Diesel Drive Unit is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities.
- f. The CPMS shall collect data at least once every 15 minutes.
- g. The minimum tolerance for a CPMS measuring temperature is 5°F (2.8°C) or 1% of the measurement range, whichever is larger.
- h. CPMS audit procedures shall be performed at least annually.

[40 CFR §63.6625(b), §63.6635, Table 6, and 06-096 CMR 115, BPT]

4. Performance Tests

- a. BIMR shall perform performance tests every 8,760 hours of operation or 3 years, whichever comes first. (Due to the fuel limit on the Diesel Drive Unit, the 3 years should always come first.) [40 CFR §63.6640(a), Table 3, and Table 6]
- b. BIMR shall conduct three separate test runs for each performance test. Each test run must be at least 1 hour, unless otherwise specified.
[40 CFR §63.6620(d)]
- c. During a performance test the facility must establish the pressure drop across the catalyst to be used to demonstrate compliance per the CPMS.
[40 CFR §63.6630(b)]
- d. If the facility changes the catalyst, BIMR shall reestablish the values of the operating parameters measured during the performance test. In order to reestablish the operating parameters, the facility shall conduct a performance test to demonstrate that the required emission limitation is being met.
[40 CFR §63.6640(b)]
[06-096 CMR 115, BPT]

5. General Requirement to Minimize Emissions

At all times the facility shall operate and maintain the Diesel Drive Unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.6605(b) and 06-096 CMR 115, BPT]

6. Reporting

BIMR shall submit to EPA all reports required by Subpart ZZZZ including, but not limited to, the following:

- a. Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [40 CFR §63.6645(g)]
- b. Semiannual Compliance Reports shall cover the period between January 1 and June 30 or July 1 through December 31 of each year and shall be postmarked by July 31 or January 31 as applicable. The Semiannual Compliance Report shall include the following information:
 - (1) Company name and address;
 - (2) Statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report;
 - (3) Date of report and beginning and ending dates of the reporting period;
 - (4) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.;

- (5) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period;
- (6) If there were no periods during which the continuous monitoring system (CMS), i.e. CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.; and
- (7) If there were periods of deviation from an emission or operating limitation occurring where the CPMS is used to comply with the emission and operating limitation, the Semiannual Compliance Report shall also include the following information:
 - (a) The date and time that each malfunction started and stopped;
 - (b) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
 - (c) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8);
 - (d) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
 - (e) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
 - (f) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, or other known causes, and other unknown causes;
 - (g) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the Diesel Drive Unit during that reporting period;
 - (h) An identification of each parameter and pollutant that was monitored;
 - (i) A brief description of stationary RICE (Diesel Drive Unit);
 - (j) A brief description of the CMS;
 - (k) The date of the last CMS certification or audit; and
 - (l) A description of any changes in CMS, processes, or controls since the last reporting period.

[40 CFR §63.6650 and Table 7]

[06-096 CMR 115, BPT]

7. Record Keeping

BIMR shall keep all records required by Subpart ZZZZ including, but not limited to, the following:

- a. A copy of each notification and report that was submitted to comply with Subpart ZZZZ, including all supporting documentation;
- b. Records of the occurrence and duration of each malfunction of the engine, pollution control equipment, or monitoring equipment;

- c. Records of the occurrence and duration of each deviation;
- d. Records of performance tests and performance evaluations;
- e. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions taken to restore normal operation;
- f. Monitoring data from the CPMS; and
- g. Records of maintenance conducted on the Diesel Drive Unit and control equipment to demonstrate the equipment was operated and maintained according to the maintenance plan.

[40 CFR §63.6655 and 06-096 CMR 115, BPT]

(17) Texas Shredder

- A. BIMR shall install and maintain spray nozzles for particulate control on the Texas Shredder and operate them as necessary to limit visible emissions to no greater than 20% 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. [06-096 CMR 115, BPT]
- B. BIMR shall maintain records detailing the maintenance on particulate matter control equipment (including spray nozzles). BIMR shall perform monthly inspections of the 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. [06-096 CMR 115, BPT]

(18) Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, 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% in any one (1) hour. [06-096 CMR 101]

(19) General Process Sources

Visible emissions from any general process source shall not exceed an opacity of 20% 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. [06-096 CMR 101]

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

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Departmental
Findings of Fact and Order
Air Emission License
Renewal

- (20) BIMR 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 11 DAY OF December, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Case *for*
AVERY T. DAY, ACTING 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 M.R.S.A. §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: 8/6/15

Date of application acceptance: 8/26/15

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

