



DEPARTMENT ORDER

Central Maine & Quebec Railway US Inc.
Piscataquis County
Milo, Maine
A-1131-71-A-N

Departmental
Findings of Fact and Order
Air Emission License
New License

FINDINGS OF FACT

After review of the air emission license application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Central Maine & Quebec Railway US Inc. (CMQ) has applied for an Air Emission License for the operation of emission sources associated with their railcar maintenance facility.

The equipment installed prior to 2018 fell below licensing thresholds. CMQ has applied to install new equipment and rehabilitate previous equipment resulting in potential emissions above licensing thresholds. Therefore, CMQ is consider an existing facility applying for a new air emission license.

The equipment addressed in this license is located at 18 B&A Avenue, Milo, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Install.	Stack #
Furnace #1	1.3	9.2	Distillate fuel, 0.0015%	2011	1
Boiler #1	1.3	9.2	Distillate fuel Spec. Waste Oil 0.0015%	2017	2
Generator #1	2.7	20.0	Distillate fuel, 0.0015%	1969	N/A

CMQ may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.

<http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf>

Additionally, CMQ may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

Process Equipment

Equipment	Pollution Control Equipment
Car Cleaning Lines #1 - #4	VOC Reduction System
Paint Booths #1 & #2	Particulate Filters HVLP Spray Guns
Grit Blast Booth #1	Baghouse
Parts Washer	N/A

CMQ may operate aqueous-based as well as solvent-based parts washers. The cleaning solution in aqueous-based parts washers contains less than 5% VOC, they do not meet the definition of solvent cleaning machines, and there are no applicable requirements in *Solvent Cleaners*, 06-096 C.M.R. ch. 130. Therefore, aqueous-based parts washers are considered insignificant activities and mentioned for completeness purposes only.

C. Definitions

Distillate Fuel. For the purposes of this license, *distillate fuel* means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) 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.

Portable Engine. For the purposes of this license, *portable engine* means an internal combustion engine which is 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. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure,

facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

Specification Waste Oil. For the purposes of this license, *specification waste oil* means a petroleum-based oil which, through use or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, and meets all of the following requirements:

- It has sufficient liquid content to be free flowing;
- It meets all of the constituent and property standards as specified in *Waste Oil Management Rules*, 06-096 C.M.R. ch. 860;
- It does not otherwise exhibit hazardous waste characteristics; and
- It has not been mixed with a hazardous waste.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

A new source is considered a major source based on whether or not total licensed annual emissions exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

Pollutant	Total Licensed Annual Emissions (TPY)	Significant Emission Levels
PM	0.8	100
PM ₁₀	0.8	100
SO ₂	–	100
NO _x	2.2	100
CO	0.5	100
VOC	49.9	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 C.M.R. ch. 115

E. Facility Classification

With the annual facility-wide VOC emission limit, the facility is licensed as follows:

- As a synthetic minor source of air emissions, because the licensed emissions are below the major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

Emissions of VOC are licensed above 80% of the major source threshold. Therefore, this facility is classified as an “80% Synthetic Minor” for the purpose of determining the minimum required compliance inspection frequency in accordance with Maine’s Compliance Monitoring Strategy.

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 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

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 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Furnace #1 and Boiler #1

CMQ operates Furnace #1 and Boiler #1 for facility heating and hot water needs. Furnace #1 and Boiler #1 are each rated at 1.3 MMBtu/hr firing distillate fuel. They were installed in 2011 and 2017 respectively, and each exhaust through its own stack.

In addition to distillate oil, Boiler #1 is licensed to fire specification waste oil. CMQ operates two oil/water separators, one tied to the locomotive shop and one tied to the car cleaning area. Previous testing of the waste oil collected in the locomotive shop separator demonstrates that it meets the definition of specification waste oil. The oil collected from the oil/water separator associated with the car cleaning operation shall be collected in batches and each batch tested to confirm it meets the definition of specification waste oil prior to being burned in Boiler #1.

1. BACT Findings

The BACT emission limits for Furnace #1 and Boiler #1 were based on the following:

PM/PM ₁₀	–	0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO ₂	–	based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO _x	–	20 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
CO	–	5 lb/1000 gal based on AP-42 Table 1.3-1 dated 5/10
VOC	–	0.34 lb/1000 gal based on AP-42 Table 1.3-3 dated 5/10
Visible Emissions	–	06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Furnace #1 and Boiler #1 are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Furnace #1	0.10	0.10	—	0.18	0.05	—
Boiler #1	0.10	0.10	—	0.18	0.05	—

Visible emissions from Furnace #1 and Boiler #1 shall each not exceed 20% opacity on a six-minute block average basis.

Fuel Sulfur Content Requirements

Furnace #1 and Boiler #1 shall fire distillate fuel with a sulfur content of 0.0015% or less by weight (15 ppm) except that any fuel already purchased and on site at the time of this license issuance may be used until depleted.

2. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their size, Furnace #1 and Boiler #1 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

3. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJ

Furnace #1 and Boiler #1 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ.

Furnace #1 does not heat water, and therefore, does not meet the definition of a “boiler” contained in this rule. Boiler #1 is less than 1.6 MMBtu/hr and considered a hot water heater. Therefore, neither Furnace #1 and Boiler #1 are subject to 40 C.F.R. Part 63, Subpart JJJJJ. [40 C.F.R. §§63.11193 and 63.11195]

C. Generator #1

CMQ operates one emergency generator (Generator #1). The emergency generator is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 2.7 MMBtu/hr which fires distillate fuel.

1. BACT Findings

The BACT emission limits for Generator #1 are based on the following:

- PM/PM₁₀ - 0.31 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
- CO - 0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
- VOC - 0.35 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
- Visible Emissions - 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generator #1 are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.85	0.85	0.14	12.08	2.60	0.96

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis.

2. New Source Performance Standards (NSPS)

Due to the date of manufacture of Generator #1, the engine is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart III since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

3. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Generator #1. This unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and it is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt this unit from the federal requirements. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 63, Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

- (i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE more than 100 hours per calendar year.

- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Generator #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

[40 C.F.R. § 63.6603(a) and Table 2(d)]

	Operating Limitations
Compression ignition (distillate fuel) units: Generator #1	<ul style="list-style-type: none">- Change oil and filter every 500 hours of operation or annually, whichever comes first;- Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Generator #1 shall be operated and maintained according to the manufacturer's emission-related written instructions, or CMQ shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program

CMQ has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, CMQ must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

- (3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on the engine.
[40 C.F.R. § 63.6625(f)]
- (4) Startup Idle and Startup Time Minimization Requirements
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
[40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]
- (5) Annual Time Limit for Maintenance and Testing
As an emergency engine, Generator #1 shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 63.6640(f)]
- (6) Recordkeeping
CMQ shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time.
[40 C.F.R. § 63.6655(f)]

D. Car Cleaning Lines #1 – #4

CMQ plans to install up to four independent process lines for cleaning of railcars (Car Cleaning Lines #1 – #4). Initially, two lines will be operated with the other two being added as workload increases. At maximum capacity, CMQ anticipates being able to clean up to 16 railcars per day.

This process involves cleaning the interior of railcars with water and surfactants. These railcars have been used to transport various products including petroleum products and other VOC and HAP containing chemicals including, but not limited to, the following:

Butane	Gasoline	Fracking oil/sand	Acids
Propane	Distillate oil	Crude oil	Caustics
	Residual oil		Clay

1. Process Description

The railcar cleaning operation will include, at a minimum, the following steps:

- Railcar Inspection
- Pre-Clean Process
- Internal Cleaning
- Material Disposition

a. Railcar Inspection

Each railcar will be inspected for tank integrity and to ensure it is empty of liquids, to the maximum extent possible, prior to initiating the cleaning operation.

b. Pre-Clean Process

Prior to railcars entering the cleaning building, the manways and other appurtenances will remain closed and sealed. The railcar will not be moved into the cleaning building if it contains a potentially explosive atmosphere.

Non-pressurized Railcars: The vapor space will be measured for the percentage of the Lower Explosive Limit (LEL) measured by means of a Photo Ionization Detector (PID) or comparable technology. This measurement will be performed without opening the hatchway or otherwise venting the railcar.

If VOCs are present in concentrations that exceed 10% LEL or the Occupational Health and Safety Administration's (OSHA) Permissible Exposure Limit (PEL), the railcar will be fitted with a gated "Y" valve and injected with an atomized degassing fluid, such as Superall 38 or comparable, and re-tested. The "Y" valve allows for simultaneous injection of the degassing fluid and collection of vapors from within the railcar. The degassing fluid attracts, binds, and condenses organic vapors.

Gases collected from this process will be sent through a carbon canister. A sample port in the exhaust stream (prior to the carbon canister) will allow for monitoring with a PID. Venting in this manner will continue until the LEL reads less than 10% and the VOCs are below OSHA's PELs for single constituent products. The "Y" valve will be shut before proceeding.

Pressurized Railcars: Railcars that have been used to transport pressurized commodities will be evaluated for remaining pressure/product within the railcar. If pressure remains in the tank car, the car will be depressurized and the resulting emissions directed to a portable "responder" flare for combustion of any remaining flammable vapors. The flare will have a propane pilot light and will be operated to

destroy gases from the railcar until insufficient pressure or vapor concentrations are present to support a flame.

After depressurization, a gated “Y” valve will be attached to the railcar. Gases collected from this process will be sent through a carbon canister. A sample port in the exhaust stream (prior to the carbon canister) will allow for monitoring with a PID. Venting in this manner will continue until the LEL reads less than 10% and the VOCs are below OSHA’s PELs for single constituent products. The “Y” valve will be shut before proceeding.

c. Internal Cleaning

Following the Pre-Clean Process, the railcar is pulled into a bay of the cleaning building and a vacuum system is attached. While pulling a slight vacuum on the railcar, the manway is opened. Collected gases are routed to the VOC Reduction System described in the BACT section below. Cleaning heads are lowered into the railcar and hydroblasting of the interior of the car commences.

d. Material Disposition

Water from the cleaning process is disposed of in accordance with the requirements of the Department’s Water Bureau. Use of the VOC Reduction System will result in spent surfactant solution and spent carbon. Both will be collected in sealed containers and evaluated for appropriate handling.

2. BACT Findings

The following summarizes the BACT findings for Car Cleaning Lines #1 – #4:

VOC and HAP compounds may be emitted from the railcars when they are opened for cleaning. Quantities of VOC/HAP emissions are dependent on the product previously stored in the railcar, the amount of product remaining in the car when it is cleaned, the methods used to empty the railcar and final disposition of product, and the volume of the railcar.

Control strategies for VOC/HAP include flares, regenerative thermal oxidizers (RTOs), and approved work practice standards to minimize emissions.

CMQ has developed work practice standards to minimize emissions of VOC and HAP from the railcar cleaning process. Prior to cleaning, each railcar will be thoroughly drained to remove as much liquid product from the car as possible. All VOC/HAP containing liquids drained from the car shall be collected and stored in closed, air-tight containers and evaluated for appropriate handling.

Included in CMQ’s work practice standards is the use of a degassing fluid, such as Supercell 38, to condense VOC/HAP vapors which are then either collected as a liquid and disposed of in sealed containers or rinsed out with the wash water. The

degassing fluid will be used to reduce vapors within the railcar to below 10% of LEL. Vapors displaced by this process will be sent through a carbon canister.

CMQ also proposes as part of their work practice standards the use of a VOC Reduction System provided by Global Vacuum Systems. During cleaning, each railcar will be exhausted through the VOC Reduction System which uses a combination surfactant tank (wet scrubber) and carbon absorption to reduce emissions of VOCs. Although the VOC Reduction System is expected to have a positive impact on VOC emissions (i.e. reduce VOC emissions), the manufacturer does not provide any specific guarantee on the amount of reduction achieved or the length of time between needed carbon replacement. Therefore, no control efficiency has been assigned to this equipment and no credit for actual VOC reduction will be given in the accounting of emissions.

Both flares and RTOs destroy VOC/HAP by burning them at high temperatures reducing them to water and CO₂. The gas stream is exposed to an open flame to combust any volatile components. CMQ has proposed use of a portable responder flare for depressurization of railcars. However, the use of a flare for non-pressurized railcars or railcars that have been depressurized is not appropriate. The degassing fluid will be used to reduce vapors within the railcars to below 10% LEL. At that point the exhaust gases will not maintain combustion. A traditional flare would require extensive pilot fuel to effectively combust the remaining gases. The economic and environmental impact of operating a large enough pilot light for use of a flare make it infeasible.

RTOs preheat the inlet emission stream with heat recovered from the incineration exhaust gases. The inlet gas stream is passed through preheated ceramic media and an auxiliary gas burner is used to reach temperatures between 1450°F and 1600°F at a specific residence time. The combusted gas exhaust then goes through a cooled ceramic bed where heat is extracted. A short-term batch process, such as this railcar cleaning process, is not well suited for control by an RTO. The long periods of time between significant VOC load would mean the ceramic media would cool and not effectively or efficiently pre-heat the incoming gases. Therefore, use of an RTO for this process is considered technically infeasible.

BACT for VOC and HAP emissions from Car Cleaning Lines #1 – #4 is determined to be operation in accordance with approved work practice standards and compliance with facility-wide emission limits of 49.9 tpy for VOC, 9.9 tpy for any single HAP, and 24.9 tpy for all HAP combined.

The following shall constitute approved work practice standards for Car Cleaning Lines #1 – #4:

- a. Prior to the Pre-Clean Process, the manways and other appurtenances shall remain closed and sealed.
- b. To the amount practicable, each railcar shall be thoroughly drained of liquids prior to cleaning.
- c. All VOC/HAP containing liquids drained from the railcar prior to cleaning shall be collected and stored in closed, air-tight containers.
- d. When depressurizing railcars, emissions shall be vented to, and controlled by, a portable responder flare.
- e. A degassing fluid shall be used to reduce the railcar vapor space to below 10% LEL prior to commencing the cleaning operation. All manways shall remain closed during this process.
- f. Vapors displaced when using the degassing fluid shall be vented to a carbon canister.
- g. To check for carbon break through, CMQ shall check the exhaust of the carbon canisters while in operation with the PID at least once per week. The carbon canister shall be replaced if the canister exhaust reads greater than 10% LEL.
- h. When cleaning railcars, the exhaust shall be vented through the VOC Reduction System.
- i. The VOC Reduction System shall be maintained in good working order per the manufacturer's written specifications.
- j. CMQ shall perform monthly inspections of the VOC Reduction System to check for leaks, carbon breakthrough, or other malfunctions.

CMQ shall not, under any circumstances, vent emissions of any chemical in excess of a Reportable Quantity per Section 304 of the Emergency Planning and Community Right-To-Know Act (EPCRA) or a Reportable Quantity per the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CMQ is responsible for evaluating expected releases from a railcar prior to depressurizing and/or degassing the railcar and checking those expected releases against the Reportable Quantities. See EPA's Consolidated List of Lists for more information.

https://www.epa.gov/sites/production/files/2015-03/documents/list_of_lists.pdf

3. Compliance

Compliance with the requirements for Car Cleaning Lines #1 – #4 shall be demonstrated by the following recordkeeping:

- a. Logs of each railcar cleaned including:
 - (1) Date cleaning was done;
 - (2) Last material the railcar carried;
 - (3) Volume of the railcar vapor space; *
 - (4) Whether the car was pressurized and, if so, the time depressurization began and whether the flare was used; *
 - (5) Time degassing began (i.e. introduction of the degassing fluid); *
 - (6) Final LEL reading when degassing ended; *
 - (7) Whether or not the VOC Reduction System was utilized during cleaning.

* These records are only required when the last material carried contained VOC and/or HAP in excess of 5% by weight.

- b. Records of the liquid collected and final disposition of the material (e.g. shipped off-site) including dates and the amount of each material.
- c. Amount of propane (gallons) purchased for use in the flare on a monthly basis.
- d. Records of monthly inspections and any maintenance activities (planned or unplanned) performed on the VOC Reduction System including the dates the carbon is replaced.
- e. Records of weekly inspections and the dates of carbon canister replacement.
- f. Monthly calculations of the VOC emissions from the railcar cleaning process. The following equation shall be used to determine the pounds of VOC emitted per railcar. Emissions for all VOC containing railcars cleaned per month shall be summed to provide the monthly total.

$$\text{Railcar VOC (lb)} = \frac{0.01 \times V \times 760 \times MW}{998.9 \times 293.15}$$

Where:

- 0.01 = Conversion factor for 10% LEL
- V = Volume of the railcar (ft³)
- 760 = Standard Pressure (760 mmHg)
- MW = Molecular weight of the substance (lb/lbmole)
- 998.9 = Ideal Gas Law Constant (998.9 mmHg-ft³/lbmole-K)
- 293.15 = Standard Temperature (293.15 K)

These calculations are based on the release of VOC from the railcars once reduced to 10% LEL using the flare and degassing fluid. They shall not take any credit for control provided by the VOC Reduction System.

- g. Monthly calculations of the individual and total HAP emissions from the railcar cleaning process. HAP emissions shall be based on the VOC emissions from each railcar and the relative percentage of HAP. For example, if benzene makes up 5% of a chemical that is 50% VOC, benzene emissions will equal 10% of the VOC emitted.

E. Paint Booths #1 and #2

CMQ plans to refurbish the existing paint booths (Paint Booths #1 and #2) used to do touchup, repair, and refinishing of railcars and locomotives.

1. Control Equipment

The paint booths will be equipped with filters for control of emissions of particulate matter (PM). Emissions of PM from paint booths are considered unquantifiable. However, CMQ shall maintain the filters so as to minimize PM emissions such that visible emissions from the paint booths do not exceed 10% opacity on a six-minute block average basis.

CMQ will use High Volume Low Pressure (HVLP) spray guns which have a higher transfer efficiency than conventional spray guns. Use of HVLP guns significantly reduces the amount of paint used and thereby reduces emissions of VOC and HAP from the painting process.

2. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart M

CMQ is not subject to the *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*, 40 C.F.R. Part 63, Subpart M. Per 40 C.F.R. § 63.3881(b), this regulation applies only to major sources of HAP. CMQ is classified as an area source of HAP.

3. Surface Coating Facilities, 06-096 C.M.R. ch. 129

CMQ is subject to *Surface Coating Facilities*, 06-096 C.M.R. ch. 129 under the category of surface coating of miscellaneous metal and plastic parts and products. The definition of "miscellaneous metal and plastic parts and products" includes transportation equipment and railroad cars. Although surface coating of aircraft, marine vessels, and refinishing of automobiles are exempt from the rule per § 1(E)(3), no such exemption exists for locomotives or railcars.

a. Emission Limitations

Actual VOC emissions from the paint booths are expected to exceed 2.7 tpy. As such, the emission limitations in Section 4 are applicable. CMQ has elected to comply with Control Option 1, use of low-VOC content coatings.

Paint Booths #1 and #2 will be used for applying touchup and repair coatings. Therefore, CMQ is exempt from using one of the application methods listed in § 4(F)(3) per § 4(F)(4)(a)(i). However, use of HVLP spray guns was still considered as part of the BACT analysis for this equipment.

The equipment painted in Paint Booths #1 and #2 is air dried, meaning it is not baked at a temperature at or above 194°F. Therefore, CMQ is limited to using coatings with a VOC content equal to or less than 0.42 kg VOC/liter (3.5 lb VOC/gal) as applied, excluding water and exempt compounds (see Table 1 of § 4(F)(5) for coating category “Repair and Touch Up”). “Exempt compounds” are those specifically defined as not being a VOC per the definition of VOC in 06-096 C.M.R. ch. 100. This limit does not apply to stencil coatings and safety-indicating coatings. In addition, in any consecutive 12 months CMQ may use up to a total of 50 gallons of coating that exceeds the VOC emission limit listed above per 06-096 C.M.R. ch. 129 § 4(G).

b. Handling, Storage, and Disposal of Materials Containing VOC

CMQ is subject to the work practice standards contained in Section 5 of 06-096 C.M.R. ch. 129. These requirements include:

(1) Vapor-tight containers shall be used for the storage of spent or fresh VOC and for the storage or disposal of cloth or paper impregnated with VOC that are used for surface preparation, clean up, or coating removal.

(2) Cleanup Operations

(i) The use of VOC is prohibited for cleanup operations unless equipment is used to collect the cleaning compounds and to minimize their evaporation to the atmosphere.

(ii) CMQ shall collect all organic solvent used to clean spray guns into a normally closed container.

(iii) CMQ shall pump or drain all organic solvent used for line cleaning into a normally closed container.

(iv) CMQ shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyers, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished,

that is, the spray booth coating or other material used to cover the booth is being replaced, CMQ may not use more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.

- (v) CMQ shall control emissions from washoff operations by:
 - 1. Using normally closed tanks for washoff; and
 - 2. Minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

c. Recordkeeping and Reporting

- (1) CMQ shall submit to the Department an initial compliance certification upon startup of each paint booth. [06-096 C.M.R. ch. 129 § 7(A)] The initial certification shall contain the following information:

- (i) Name and location of the facility;
- (ii) Name, address, and telephone number of the facility's Responsible Official;
- (iii) Identification of each coating used;
- (iv) The mass of VOC per volume of each coating (e.g. lb VOC/gal), excluding water and exempt compounds, as applied, expected to be used each day in each paint booth; and
- (v) The time at which the facility's "day" begins if a time other than midnight is used to define a "day."

[06-096 C.M.R. ch. 129, § 7(A)(2)]

- (2) CMQ shall keep records of the following:
 - (i) Name and identification of each coating; and
 - (ii) Mass of VOC per volume (e.g. lb VOC/gal), excluding water and exempt compounds, as applied used each month.

[06-096 C.M.R. ch. 129, § 7(B)(2)]

- (3) CMQ shall notify the Department in writing within thirty (30) calendar days of the use of any coatings that do not meet the VOC content limit except for the following:

- (i) The first 50 gallons per continuous 12-month rolling period; and
[06-096 C.M.R. ch. 129, § 4(G)]
- (ii) Exempt coatings including stencil coatings and safety-indicating coatings.
[06-096 C.M.R. ch. 129, § 4(F)(5)(Table 1 notes)]

[06-096 C.M.R. ch. 129, § 8(B)(2)]

4. BACT

BACT for Paint Booths #1 and #2 is determined to be the following:

- a. Use of fabric filters to limit emissions of PM.
- b. Use of HVLP paint guns to minimize emissions of VOC and HAP.
- c. A limit of VOC content in coatings of 0.42 kg VOC/liter (3.5 lb VOC/gal) as applied, excluding water and exempt compounds, except for up to 50 gallons per continuous 12-month period and exempt coatings such as stencil coatings and safety-indicating coatings.
- d. Compliance with the work practices contained in 06-096 C.M.R. ch. 129.
- e. Compliance with facility-wide emission limits of 49.9 tpy for VOC, 9.9 tpy for any single HAP, and 24.9 tpy for all HAP combined
- f. A limit on visible emissions from each spray booth of 10% on a six-minute block average basis.

5. Additional Recordkeeping

In addition to the recordkeeping required by 06-096 C.M.R. ch. 129, CMQ shall maintain the following records in order to demonstrate compliance with the requirements for Paint Booths #1 and #2:

- a. Amount (gallons) of each coating used each month.
- b. Amount (gallons) of each coating used on a monthly and 12-month rolling total basis which does not meet the VOC content limit and whether it is an exempt coating such as a stencil coating or safety-indicating coating.
- c. VOC/HAP content of each coating.
- d. Total emissions of VOC and individual and total emissions of HAP from the paint booths on a monthly and 12-month rolling total basis.
- e. Records of any maintenance activities (planned or unplanned) performed on the paint booths including filter replacements.

F. Grit Blast Booth #1

CMQ plans to refurbish the shot blast booth (Grit Blast Booth #1) used to remove old paint and rust from railcars and locomotives before refinishing in the paint booths.

Grit Blast Booth #1 uses a baghouse for control of emissions of particulate matter (PM). Shot blasting shall only occur with Grit Blast Booth #1 closed and vented to the baghouse. Visible emissions from the baghouse shall not exceed 10% opacity on a six-minute block average basis.

CMQ shall perform monthly inspections of Grit Blast Booth #1 and its associated baghouse to check for leaks or other malfunctions. Records shall be kept of monthly inspections and any maintenance activities (planned or unplanned) performed on the baghouse.

G. Parts Washers

CMQ may operate cold cleaning machines or parts washers subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130. Records shall be kept documenting compliance.

The cleaning solution in aqueous-based parts washers contains less than 5% VOC, they do not meet the definition of solvent cleaning machines, and there are no applicable requirements in *Solvent Cleaners*, 06-096 C.M.R. ch. 130. Therefore, aqueous-based parts washers are considered insignificant activities and mentioned for completeness purposes only.

H. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour.

I. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

J. Emission Statements

CMQ is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. CMQ shall maintain the following records in order to comply with this rule:

1. The amount of distillate fuel fired in Furnace #1, Boiler #1, and Generator #1 on a calendar year basis;
2. The sulfur content of the distillate fuel fired in Furnace #1, Boiler #1, and Generator #1;
3. The amount of propane purchased for use by the flare on a calendar year basis;
4. Monthly calculations of the VOC and HAP emissions from the railcar cleaning process;
5. Monthly calculations of the VOC and HAP emissions from the paint booths; and
6. Annual hours of operation for each emission unit on a calendar year basis.

Beginning with reporting year 2020 and every third year thereafter, CMQ shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. CMQ shall pay the annual air quality surcharge, calculated by the Department based on these reported

emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).
[38 M.R.S. § 353-A(1-A)]

K. Annual Emissions

1. Total Annual Emissions

CMQ shall be restricted to the following annual emissions, based on a 12-month rolling total. Emissions were calculated based on the following:

- Operation of Furnace #1 and Boiler #1 for 8,760 hours/year;
- Operation of Generator #1 for 100 hours/year; and
- Compliance with a facility-wide limits for VOC and HAP.

Total Licensed Annual Emissions for the Facility
Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Furnace #1	0.4	0.4	–	0.8	0.2	–
Boiler #1	0.4	0.4	–	0.8	0.2	–
Generator #1	–	–	–	0.6	0.1	–
Facility	–	–	–	–	–	49.9
Total TPY	0.8	0.8	–	2.2	0.5	49.9

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

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 C.F.R. Part 52, Subpart A, § 52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100, 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 maximum potential fuel use;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and *Mandatory Greenhouse Gas Reporting*, 40 C.F.R. Part 98; and
- global warming potentials contained in 40 C.F.R. 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 is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 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:

Pollutant	Tons/Year
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-1131-71-A-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. § 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. 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 C.F.R. 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 C.M.R. ch. 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 C.F.R. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(16) **Furnace #1 and Boiler #1**

A. CMQ shall not purchase or otherwise obtain distillate fuel for use in Furnace #1 or Boiler #1 with a sulfur content that exceeds 0.0015% by weight (15ppm). Any fuel already purchased and on site at the time of this license issuance may be used until depleted. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered.

[06-096 C.M.R. ch. 115, BACT]

B. Boiler #1 is licensed to fire specification waste oil. CMQ shall keep records to demonstrate that the waste oil fired in Boiler #1 meets the definition of specification waste oil. The oil collected from the oil/water separator associated with the car cleaning

operation shall be collected in batches and each batch tested to confirm it meets the definition of specification waste oil prior to being burned in Boiler #1.
[06-096 C.M.R. ch. 115, BACT]

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Furnace #1	0.10	0.10	—	0.18	0.05	—
Boiler #1	0.10	0.10	—	0.18	0.05	—

D. Visible emissions from Furnace #1 and Boiler #1 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

(17) **Generator #1**

A. Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]

B. The fuel sulfur content for Generator #1 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 C.M.R. ch. 115, BACT]

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.85	0.85	0.14	12.08	2.60	0.96

D. Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

E. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BACT]

1. CMQ shall meet the following operational limitations for Generator #1:

- a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

- b. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations. [40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

2. Oil Analysis Program Option

CMQ has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, CMQ must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

- a. As an emergency engine, Generator #1 shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

- b. CMQ shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or CMQ shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup, the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(18) **Car Cleaning Lines #1 – #4**

A. CMQ shall comply with the following approved work practice standards for Car Cleaning Lines #1 – #4:

1. Prior to the Pre-Clean Process, the manways and other appurtenances shall remain closed and sealed.
2. To the amount practicable, each railcar shall be thoroughly drained of liquids prior to cleaning.
3. All VOC/HAP containing liquids drained from the railcar prior to cleaning shall be collected and stored in closed, air-tight containers.
4. When depressurizing railcars, emissions shall be vented to, and controlled by, a portable responder flare.
5. A degassing fluid shall be used to reduce the railcar vapor space to below 10% LEL prior to commencing the cleaning operation. All manways shall remain closed during this process.
6. Vapors displaced when using the degassing fluid shall be vented to a carbon canister.
7. To check for carbon break through, CMQ shall check the exhaust of the carbon canisters while in operation with the PID at least once per week. The carbon canister shall be replaced if the canister exhaust reads greater than 10% LEL.
8. When cleaning railcars, the exhaust shall be vented through the VOC Reduction System.
9. The VOC Reduction System shall be maintained in good working order per the manufacturer's written specifications.
10. CMQ shall perform monthly inspections of the VOC Reduction System to check for leaks, carbon breakthrough, or other malfunctions.

[06-096 C.M.R. ch. 115, BACT]

B. CMQ shall not, under any circumstances, vent emissions of any chemical in excess of a Reportable Quantity per Section 304 of the Emergency Planning and Community Right-To-Know Act (EPCRA) or a Reportable Quantity per the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

[06-096 C.M.R. ch. 115, BACT]

C. Compliance with the requirements for Car Cleaning Lines #1 – #4 shall be demonstrated by the following recordkeeping [06-096 C.M.R. ch. 115, BACT]:

1. Logs of each railcar cleaned including:
 - a. Date cleaning was done;
 - b. Last material the railcar carried;
 - c. Volume of the railcar vapor space; *
 - d. Whether the car was pressurized and, if so the time depressurization began and whether the flare was used; *
 - e. Time degassing began (i.e. introduction of the degassing fluid); *
 - f. Final LEL reading when degassing ended; *
 - g. Whether or not the VOC Reduction System was utilized during cleaning.

* These records are only required when the last material carried contained VOC and/or HAP in excess of 5% by weight.

2. Records of the liquid collected and final disposition of the material (e.g. shipped off-site) including dates and the amount of each material.
3. Amount of propane (gallons) purchased for use in the flare on a monthly basis.
4. Records of monthly inspections and any maintenance activities (planned or unplanned) performed on the VOC Reduction System including the dates the carbon is replaced.
5. Records of weekly inspections the dates of carbon canister replacement.
6. Monthly calculations of the VOC emissions from the railcar cleaning process. The following equation shall be used to determine the pounds of VOC emitted per railcar. Emissions for all VOC containing railcars cleaned per month shall be summed to provide the monthly total.

$$\text{Railcar VOC (lb)} = \frac{0.01 \times V \times 760 \times MW}{998.9 \times 293.15}$$

Where:

- 0.01 = Conversion factor for 10% LEL
V = Volume of the railcar (ft³)
760 = Standard Pressure (760 mmHg)
MW = Molecular weight of the substance (lb/lbmole)
998.9 = Ideal Gas Law Constant (998.9 mmHg-ft³/lbmole-K)
293.15 = Standard Temperature (293.15 K)

These calculations are based on the release of VOC from the railcars once reduced to 10% LEL using the flare and degassing fluid. They shall not take any credit for control provided by the VOC Reduction System.

7. Monthly calculations of the individual and total HAP emissions from the railcar cleaning process. HAP emissions shall be based on the VOC emissions from each

railcar and the relative percentage of HAP. For example, if benzene makes up 5% of a chemical that is 50% VOC, benzene emissions will equal 10% of the VOC emitted.

(19) Paint Booths #1 and #2

- A. Paint Booths #1 and #2 shall each be equipped with filters for control of emissions of PM. CMQ shall maintain the filters so as to minimize PM emissions.
[06-096 C.M.R. ch. 115, BACT]
- B. Visible emissions from Paint Booths #1 and #2 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- C. CMQ shall use only HVLP spray guns in Paint Booths #1 and #2.
[06-096 C.M.R. ch. 115, BACT]
- D. CMQ shall only use coatings with a VOC content equal to or less than 0.42 kg VOC/liter (3.5 lb VOC/gal) as applied, excluding water and exempt compounds except for the following:
 1. CMQ may use up to a total of 50 gallons of coating that exceeds the VOC emission limit above in any 12-month period. [06-096 C.M.R. ch. 129, § 4(G)]
 2. The VOC emission limit above does not apply to stencil coatings and safety-indicating coatings.
[06-096 C.M.R. ch. 129, § 4(F)(5), Table 1]
- E. CMQ is subject to the following work practice standards [06-096 C.M.R. ch. 129, § 5]:
 1. Vapor-tight containers shall be used for the storage of spent or fresh VOC and for the storage or disposal of cloth or paper impregnated with VOC that are used for surface preparation, clean up or coating removal.
 2. Cleanup Operations
 - a. The use of VOC is prohibited for cleanup operations unless equipment is used to collect the cleaning compounds and to minimize their evaporation to the atmosphere.
 - b. CMQ shall collect all organic solvent used to clean spray guns into a normally closed container.
 - c. CMQ shall pump or drain all organic solvent used for line cleaning into a normally closed container.
 - d. CMQ shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyers, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth

coating or other material used to cover the booth is being replaced, CMQ may not use more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.

- e. CMQ shall control emissions from washoff operations by:
 - (1) Using normally closed tanks for washoff; and
 - (2) Minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

F. Recordkeeping and Reporting

1. CMQ shall submit to the Department an initial compliance certification upon startup of each paint booth. [06-096 C.M.R. ch. 129 § 7(A)]
2. The initial certification shall contain the following information:
 - a. Name and location of the facility;
 - b. Name, address, and telephone number of the facility's Responsible Official;
 - c. Identification of each coating used;
 - d. The mass of VOC per volume of each coating (e.g. lb VOC/gal), excluding water and exempt compounds, as applied, expected to be used each day in each paint booth; and
 - e. The time at which the facility's "day" begins if a time other than midnight is used to define a "day."
[06-096 C.M.R. ch. 129, § 7(A)(2)]
3. CMQ shall keep records of the following:
 - a. Name and identification of each coating. [06-096 C.M.R. ch. 129, § 7(B)(2)]
 - b. Mass of VOC per volume (e.g. lb VOC/gal), excluding water and exempt compounds, as applied for each coating. [06-096 C.M.R. ch. 129, § 7(B)(2)]
 - c. Amount (gallons) of each coating used each month.
 - d. Amount (gallons) of each coating used on a monthly and 12-month rolling total basis which does not meet the VOC content limit and whether it is an exempt coating such as a stencil coating or safety-indicating coating.
 - e. VOC/HAP content of each coating.
 - f. Total emissions of VOC and individual and total emissions of HAP from the paint booths on a monthly and 12-month rolling total basis.
 - g. Records of any maintenance activities (planned or unplanned) performed on the paint booths including filter replacements.
[06-096 C.M.R. ch. 115, BACT (except where noted)]

4. CMQ shall notify the Department in writing within thirty (30) calendar days of the use of any coatings that do not meet the VOC content limit except for the following:
 - a. The first 50 gallons per continuous 12-month rolling period; and
[06-096 C.M.R. ch. 129, § 4(G)]
 - b. Exempt coatings including stencil coatings and safety-indicating coatings.
[06-096 C.M.R. ch. 129, § 4(F)(5)(Table 1 notes)]
[06-096 C.M.R. ch. 129, § 8(B)(2)]

(20) **Grit Blast Booth #1**

- A. CMQ shall operate and maintain a baghouse on Grit Blast Booth #1 so as to minimize PM emissions. [06-096 C.M.R. ch. 115, BACT]
- B. When in operation, Grit Blast Booth #1 shall be closed and vented to the baghouse. [06-096 C.M.R. ch. 115, BACT]
- C. Visible emissions from Grit Blast Booth #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]
- D. CMQ shall perform monthly inspections of Grit Blast Booth #1 and its associated baghouse to check for leaks or other malfunctions. Records shall be kept of monthly inspections and any maintenance activities (planned or unplanned) performed on the baghouse. [06-096 C.M.R. ch. 115, BACT]

(21) **Annual VOC/HAP Emission Limits**

- A. Total facility-wide annual emissions of VOC shall not exceed 49.9 tpy on a 12-month rolling total basis. Compliance with this limit shall be demonstrated through the recordkeeping outlined below with calculations of emissions performed monthly. [06-096 C.M.R. ch. 115, BACT]
- B. Facility-wide annual emissions of HAP shall not exceed 9.9 tpy on a 12-month rolling total basis for any single HAP and 24.9 tpy on a 12-month rolling total basis for all HAP combined. Compliance with these limits shall be demonstrated through the recordkeeping outlined below with calculations of emissions performed monthly. [06-096 C.M.R. ch. 115, BACT]

C. Compliance with the annual facility-wide VOC and HAP emission limits shall be demonstrated by the following recordkeeping:

1. Monthly calculations of the VOC and HAP emissions from the railcar cleaning process based on the recordkeeping and calculations outlined in that section.
2. Monthly calculations of the VOC and HAP emissions from the paint booths based on the amount of coatings used and the VOC/HAP content of each coating.

Emissions of VOC/HAP from Furnace #1, Boiler #1, Generator #1, and the Parts Washers are determined to be negligible and are not required to be included as part of the annual facility-wide VOC and HAP emissions for compliance purposes.
[06-096 C.M.R. ch. 115, BACT]

(22) **Parts Washers**

Parts washers at CMQ subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 shall comply with the following:

- A. CMQ shall keep records of the amount of solvent added to each parts washer. This condition does not apply to parts washers which are exempt from the requirements of 06-096 C.M.R. ch. 130 as outlined below. [06-096 C.M.R. ch. 115, BACT]
- B. The following are exempt from the requirements of 06-096 C.M.R. ch. 130 [06-096 C.M.R. ch. 130]:
 1. Solvent cleaners using less than two liters (68 oz.) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
 2. Wipe cleaning; and,
 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to cold cleaning machines that are applicable sources under 06-096 C.M.R. ch. 130.
 1. CMQ shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 C.M.R. ch. 130]:
 - a. Waste solvent shall be collected and stored in closed containers.
 - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.

- e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
 - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
 - h. Work area fans shall not blow across the opening of the parts washer unit.
 - i. The solvent level shall not exceed the fill line.
2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches.
 3. Each parts washer shall be equipped with a cover that shall be closed at all times except during cleaning or the addition or removal of solvent.
- [06-096 C.M.R. ch. 130]

(23) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period during which time visible emissions shall not exceed 30% opacity. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour. [06-096 C.M.R. ch. 115, BACT]

(24) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

(25) **Annual Emission Statement**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, CMQ shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. CMQ shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of distillate fuel fired in Furnace #1, Boiler #1, and Generator #1 on a calendar year basis;
2. The sulfur content of the distillate fuel fired in Furnace #1, Boiler #1, and Generator #1;
3. The amount of propane purchased for use by the flare on a calendar year basis;

4. Monthly calculations of the VOC and HAP emissions from the railcar cleaning process;
 5. Monthly calculations of the VOC and HAP emissions from the paint booths; and
 6. Annual hours of operation for each emission unit on a calendar year basis. [06-096 C.M.R. ch. 137]
- C. Beginning with reporting year 2020 and every third year thereafter, CMQ shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). CMQ shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]
- (26) CMQ 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. § 605).

DONE AND DATED IN AUGUSTA, MAINE THIS 17 DAY OF May, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Corve for
PAUL MERCER, COMMISSIONER

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

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/18/17

Date of application acceptance: 12/20/17

Date filed with the Board of Environmental Protection:

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

