STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Cives Corporation - Cives Steel Company, New England Division **Kennebec County** **Augusta, Maine** **A-1175-71-A-N**	**Departmental** **Findings of Fact and Order** **Air Emission License** **After-the-Fact**

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

Cives Corporation – Cives Steel Company, New England Division (Cives) has applied for an Air Emission License after-the-fact for the operation of emission sources associated with their structural steel production facility.

The equipment addressed in this license is located at 103 Lipman Rd, Augusta, Maine.

B. Title, Right, or Interest

In their application, Cives submitted copies of a property deed demonstrating ownership of the facility. Cives has provided sufficient evidence of title, right, or interest in the facility for purposes of this air emission license.

C. Emission Equipment

The following equipment is addressed in this air emission license:

Area Heaters

Equipment	Location	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
AH[1] #1	Wheelabrator Area	1.25	13.7 gal/hr	Propane	2012	2012	Vent #1
AH #2	Heavy Area	1.25	13.7 gal/hr	Propane	2012	2012	Vent #2
AH #3	Paint Area	1.25	13.7 gal/hr	Propane	2012	2012	Vent #3

[1] AH = Area Heater

Cives also has several small area heaters not listed in the table above. These are considered insignificant emissions units because they are each rated below 1.0 MMBtu/hr, the heat input capacity level at or above which would require their inclusion in the license; therefore, these small area heaters are not addressed further in this license.

Cives 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, Cives 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	Emissions	Pollution Control Equipment
Band Saw #1	PM and MFHAP	None
Band Saw #2	PM and MFHAP	None
Drill Line	PM and MFHAP	None
Coping Line	PM and MFHAP	None
Plate Burner and Punching Machine	PM and MFHAP	Dust collector system
Abrasive Blasting Machine	PM and MFHAP	Dust collector (inlet), material recovery and recirculation system, dust collector system
Hand Welding Operations	MFHAP	Fume Extractors
Painting Operations	PM, HAP, and VOC	None
Parts Washer	VOC	None

D. Definitions

Metal Fabrication and Finishing Hazardous Air Pollutants (MFHAP) means any compound of the following metals: cadmium, chromium, lead, manganese, or nickel; or any of these metals in elemental form, except lead.[2]

Portable or Non-Road 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,

[2] *National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories,* 40 C.F.R. Part 63, Subpart XXXXXX § 63.11522

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.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

Records or *Logs* mean either hardcopy or electronic records.

E. Application Classification

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

A new source is considered a major source based on whether or not total licensed annual emissions exceed the "Significant Emissions" 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	0.9	100
PM_{10}	0.9	100
$PM_{2.5}$	0.9	100
SO_2	--	100
NO_x	2.4	100
CO	1.2	100
VOC	39.3	100

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.

F. Facility Classification

With the annual VOC limits associated with the painting operations, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Cives is subject to license restrictions that keep facility emissions below major source thresholds for VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for 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 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. Facility Layout

The raw steel materials that Cives processes are stored outside to the northeast of the main facility building. A handheld propane torch is used in the winter to remove snow from the steel. There are four outbuildings in the storage area that contain the cutting equipment. The Abrasive Blasting Machine, Plate Burning and Punching Machine, Hand Welding Operations, and Painting Operations are all contained in the main facility building. The raw steel materials are maneuvered around the facility using a series of conveyor systems.

C. Area Heaters #1, #2, and #3

Cives operates three area heaters, AH #1, AH #2, and AH #3, each rated at 1.25 MMBtu/hr and firing propane**.** The heaters were manufactured and installed in 2012. Each of the three area heaters exhausts through its own vent.

1. BACT Findings

Following is a BACT analysis for control of emissions from AH #1, AH #2, and AH #3.

a. Particulate Matter (PM, PM_{10}, $PM_{2.5}$)

Cives has proposed to burn only low ash-content fuel (propane) in AH #1, AH #2, and AH #3. Given that the expected maximum PM, PM_{10}, and $PM_{2.5}$ emissions from operating all three propane heaters at 8,760 hr/yr each is less than 1 tpy, additional add-on pollution controls are not economically feasible.

BACT for $PM/PM_{10}/PM_{2.5}$ emissions from AH #1, AH #2, and AH #3 is the emission limits listed in the tables below.

b. Sulfur Dioxide (SO_2)

Cives has proposed to fire only propane. The use of this fuel results in minimal emissions of SO_2, and additional add-on pollution controls are not economically feasible.

BACT for SO_2 emissions from AH #1, AH #2, and AH #3 is the use of propane and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Cives considered several control strategies for the control of NO_x including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, flue gas recirculation (FGR), and low NO_x burners.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. Both methods include injection of a NO_x reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO_x to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than AH #1, AH #2, and AH #3.

Water/steam injection and FGR can attain similar NO_x reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO_x formation. However, both control strategies reduce the heaters' fuel efficiency.

Low-NO_x burners control mixing of fuel and air in a pattern that keeps flame temperature lower and dissipates the heat quickly. The reduced flame temperature lowers the thermal NO_x emissions; the resulting lower oxygen levels in the flame also reduces fuel NO_x emissions.

Given that the expected maximum NO_x emissions from operating all three propane heaters at 8,760 hr/yr each is less than 3 tpy, additional add-on pollution controls are not economically feasible.

BACT for NO_x emissions from AH #1, AH #2, and AH #3 is the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Cives considered several control strategies for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boilers in question. These controls were determined to be economically infeasible.

An oxygen (O_2) trim system monitors the O_2 content in the exhaust gas and automatically adjusts the fuel valve or air damper to optimize the air-to-fuel ratio. The expected maximum emissions from operating AH #1, AH #2, and AH #3 at 8,760 hr/yr each is 1.2 tpy of CO and less than 0.3 tpy of VOC; therefore, an oxygen trim system is not economically feasible.

BACT for CO and VOC emissions from AH #1, AH #2, and AH #3 are the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Area Heaters #1, #2, and #3 were based on the following:

<u>Propane</u>

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO_2	–	0.054 lb/1,000 gal based on AP-42 Table 1.5-0 dated 7/08 and a sulfur content of 0.54 gr/100 ft^3
NO_x	–	13 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
CO	–	7.5 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
VOC	–	1.0 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
Visible Emissions	–	06-096 C.M.R. ch. 101

The BACT emission limits for Area Heaters #1, #2, and #3 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
AH #1	0.06	0.06	0.06	0.001	0.18	0.10	0.01
AH #2	0.06	0.06	0.06	0.001	0.18	0.10	0.01
AH #3	0.06	0.06	0.06	0.001	0.18	0.10	0.01

2. Visible Emissions

   Visible emissions from AH #1, AH #2, and AH #3 shall not exceed 10% opacity on a six-minute block average basis.

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

   AH #1, AH #2, and AH #3 are not steam generating units and are therefore 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]

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

   AH #1, AH #2, and AH #3 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 JJJJJJ. AH #1, AH #2, and AH #3 fire propane and do not meet the definition of a boiler as defined in 40 C.F.R. § 63.11237 and are therefore exempt from 40 C.F.R. Subpart JJJJJJ. [40 C.F.R. §§ 63.11193, 63.11195, and 63.11237]

D. Steel Manufacturing

1. Cutting Equipment

   Cives operates two structural steel band saws, a drill line, and a coping line. The band saws are used for cutting the raw material (steel) to length. The drill line is used for cutting holes into the steel. The coping line is used to cut slots and indentations into the steel. The potential emissions from the cutting equipment are PM and MFHAP from the dust and debris generated during the cutting operations.

   The coping line has three combustion heads that fire propylene gas. The combustion heads do not generate substantial quantities of Hazardous Air Pollutants (HAP) or HAP precursors and are therefore considered categorically exempt per 06-096 C.M.R. ch. 115, Appendix B, Section A.34.

a. BACT Findings

Each piece of cutting equipment is contained within its own small outbuilding. The outbuildings each have openings in the sides where the conveyor system transports the metal into and out of the building. BACT for PM/PM_{10}/$PM_{2.5}$ and MFHAP emissions shall be the *NESHAP Area Source Standards for Nine Metal Fabrication and Finishing Source Categories* 40 C.F.R. Part 63, Subpart XXXXXX (Subpart XXXXXX) standards and management practices for the cutting equipment operations outlined in part (6) of this section. [06-096 C.M.R. ch. 115, BACT]

b. National Emission Standards for Hazardous Air Pollutants (NESHAP)

The cutting equipment operations are subject to applicable requirements of Subpart XXXXXX. The cutting, drilling, and coping are all considered to be machining operations under Subpart XXXXXX. [40 C.F.R. §§ 63.11514 and 63.11522] The standards and management practices applicable to the cutting equipment operations are addressed in part (6) of this section.

c. Visible Emissions

Visible emissions from the cutting equipment shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

2. Abrasive Blasting Machine

Cives operates a Wheelabrator Abrasive Blasting Machine that cleans and prepares the surface of steel using a cast steel shot and grit. The Abrasive Blasting Machine uses a wheel to throw the steel abrasive material at the parts getting cleansed, which removes rust, paint, scale, and other contaminants from the steel surface and roughens it for subsequent treatment. The potential emissions from the Abrasive Blasting Machine are PM/PM_{10}/$PM_{2.5}$ and MFHAP from the dust and debris generated during the operations.

a. BACT Findings

<u>Dust Collector and Dust Collection Shed</u>
The inlet of the Abrasive Blasting Machine is controlled by a dust collector, which discharges the captured dust to an outdoor dust collection shed that is equipped with filters that gather the dust in a 55-gallon drum. The inlet dust collector is inspected monthly, and filters are replaced as required. During each shift, Cives' operators monitor the dust collection system and verify levels in the 55-gallon drums, which are changed out as necessary.

Material Recovery and Recirculation System

A material recovery and recirculation system is used to recycle the abrasive material and remove the debris. Inspection and review of the material recovery and recirculation system takes place monthly. The system is monitored by Cives' operators on a routine basis each shift. Abrasive flow and amp meters alert the operator to any abnormal condition. Any issue noted is reported to maintenance. Inspection and repairs are completed as necessary.

Dust Collector System

A dust collector system is used to remove and collect debris and other fine abrasives from the process. The dust collection system is equipped with cartridge filters with a design PM control efficiency of 99.9%. The filtration system for the dust collector system has an eight-set pulse air system that pulses on a continuous cycle. Once the eight pulsers have run through sequence, the cycle starts again, ensuring filters remain clear. Filters are checked monthly and replaced as required.

BACT Determination

The Department finds that the current use of the dust collector and dust collection shed, the material recovery and recirculation system, and the dust collection system is BACT for PM/PM_{10}/$PM_{2.5}$ and MFHAP emissions from this process. The Subpart XXXXXX standards and management practices applicable to the Abrasive Blasting Machine outlined in part (6) of this section is BACT as well.

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

b. National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Abrasive Blasting Machine is subject to requirements contained in 40 C.F.R. Part 63, Subpart XXXXXX. The Abrasive Blasting Machine is considered to be dry abrasive blasting under Subpart XXXXXX. [40 C.F.R. §§ 63.11514 and 63.11522] The standards and management practices applicable to the Abrasive Blasting Machine operations are addressed in part (6) of this section.

c. Visible Emissions

Visible emissions from the abrasive blasting operations shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

The visible emissions requirements of Subpart XXXXXX are addressed in part (6) of this section.

3. Plate Burning and Punching Machine

Cives operates a Peddinghaus FPB Plate Burning and Punching Machine that is used to produce holes in the steel. Dust generated by the process is controlled by a Peddinghaus cartridge dust collection system which exhausts outside. The dust collection filters are equipped with pressure differential gauges. The entire Peddinghaus process, excluding the dust collection system, is contained within the facility building. The facility building is equipped with roof-mounted Fume Extractors that vent inside the building. Cives also has an Avenger burning table which uses oxyacetylene to produce holes in the steel, which is fully contained within the building. The potential emissions from the Plate Burning and Punching Machine are PM/PM_{10}/$PM_{2.5}$ and MFHAP from the dust and debris generated during the operations.

a. BACT Findings

Dust Collection System

Cives shall operate the dust collection system to minimize dust emissions from the Plate Burning and Punching Machine. The dust collection system is equipped with four cartridge filters with a design PM control efficiency of 99.9%. The dust collection system runs only during operation of the Plate Burning and Punching Machine. The filters are routinely monitored during system operation by checking their H_2O magnehelic gages, which indicate the differential pressure from 0-8 inches, where a differential pressure of 8 inches would indicate plugged filters. The dust collection system is equipped with a four-set, pulse air system that pulses the four filters on a continuous cycle. This cleans and ensures flow through the filtration system. When the differential pressure reaches 6.5-7 inches, the filters are changed. The filters are always changed annually, regardless of differential pressure. All corrective or preventative maintenance performed on the dust collection system shall be documented in a maintenance log and made available to the Department upon request. [06-096 C.M.R. ch. 115, BACT]

Fume Extractors

The Fume Extractors use a fan to pull contaminated air in to a contained filtration system. This process removes particles from the air by passing the contaminated air through a filter, trapping the contaminants (particulate matter) within the filter, and returning the cleaned air to the building. Although fume extractors are used to improve air quality in the building, they are also beneficial in reducing air emissions because they prevent air contaminants from being exhausted to the outside air.

The Fume Extractors' filters are routinely monitored by checking their H_2O magnehelic gages, which indicate the differential pressure from 0-5 inches, where a differential pressure of 5 inches would indicate clogged filters. When the differential pressure reaches 3.5-4 inches, the external filter is cleaned, and the interior filters (main filter) are changed. These filters are cleaned and changed

monthly, regardless of the differential pressure. All corrective or preventative maintenance performed on the Fume Extractors shall be documented in a maintenance log that is made available to the Department upon request. [06-096 C.M.R. ch. 115, BACT]

The Department finds that the current use of the dust collection system and the Fume Extractors is BACT for PM/PM_{10}/$PM_{2.5}$ and MFHAP emissions from this process. The Subpart XXXXXX standards and management practices applicable to the Plate Burning and Punching Machine outlined in part (6) of this section is also BACT. [06-096 C.M.R. ch. 115, BACT]

b. National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Plate Burning and Punching Machine is subject to the 40 C.F.R. Part 63, Subpart XXXXXX. The Plate Burning and Punching Machine is considered to be machining operations under Subpart XXXXXX. [40 C.F.R. §§ 63.11514 and 63.11522] The standards and management practices applicable to the Plate Burning and Punching Machine are addressed in part (6) of this section.

c. Visible Emissions

Visible emissions from the Plate Burning and Punching Machine shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

4. Hand Welding Operations

Cives has a variety of hand welding stations throughout the production and assembly floor. The potential emissions from hand welding operations are MFHAP.

a. BACT Findings

Cives uses more than 2,000 pounds per year of welding rod containing MFHAP. The Department finds the current use of the Fume Extractors and the Subpart XXXXXX standards and management practices applicable to the Hand Welding Operations outlined in part (6) of this section are BACT for MFHAP emissions from this process. [06-096 C.M.R. ch. 115, BACT]

b. National Emission Standards for Hazardous Air Pollutants (NESHAP)

The Hand Welding Operations are subject to Subpart XXXXXX. [40 C.F.R. §§ 63.11514 and 63.11522] The standards and management practices applicable to the Hand Welding Operations are addressed in part (6) of this section.

c. Visible Emissions

Visible emissions from the Hand Welding Operations shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

The visible emissions requirements of Subpart XXXXXX are addressed in part (6) of this section.

5. *National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories*: 40 C.F.R. Part 63, Subpart XXXXXX

Cives is subject to Subpart XXXXXX because the facility is primarily engaged in fabricated structural metal manufacturing. Therefore, the cutting equipment, Plate Burning and Punching Machine, Abrasive Blasting Operations, and Hand Welding Operations are subject to the Standards and Management Practices detailed in Subpart XXXXXX. [40 C.F.R § 63.11514 (b)]

A summary of the currently applicable Subpart XXXXXX requirements is listed below.

a. Notification Requirements [40 C.F.R. § 63.11519(a)]

(1) Submittal of the initial notification required by 40 C.F.R. § 63.9(b) was due no later than 120 days after the source became subject to this subpart. Cives has confirmed that they submitted the initial notification more than ten years ago. Subpart XXXXXX requires records retention for five years following the date of each occurrence, measurement, corrective action, report, or record; and Standard Condition (8) of this license requires all records be retained for six years. Therefore, Cives is no longer required to maintain records of the initial notification.

(2) A notification of compliance status was also required to be submitted no later than November 22, 2011. Cives has confirmed that they submitted the notification of compliance status more than ten years ago. In accordance with the records retention requirements described in the previous paragraph, Cives is no longer required to maintain records of the initial notification of compliance status.

b. Standards and Management Practices

(1) Cutting equipment and Plate Burning and Punching Machine [40 C.F.R. § 63.11516(b)]

Cives shall implement management practices to minimize emissions of MFHAP as specified below. These requirements do not apply when machining operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.

a) Cives shall take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable.
b) Cives shall operate all equipment associated with machining according to manufacturer's instructions.

(2) Dry Abrasive Blasting [40 C.F.R. § 63.11516(a)]

Cives shall comply with the following requirements:

a) Cives shall capture emissions and vent them to a filtration control device.
b) Cives shall operate the filtration control device according to manufacturer's instructions and demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices.
c) Cives shall implement the management practices to minimize emissions of MFHAP as specified below.

i. Cives shall take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable;
ii. Cives shall minimize emissions of dust associated with dry abrasive blasting operations by enclosing storage areas and holding bins, and keeping chutes and conveyors sealed; and
iii. Cives shall operate all equipment associated with dry abrasive blasting operations according to the manufacturer's instructions.

(3) Hand Welding Operations

a) For each new or existing welding affected source at Cives that uses materials containing one or more MFHAP or has the potential to emit MFHAP, Cives shall comply with the following requirements. These requirements do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

i. Cives shall operate all equipment and capture and control devices associated with welding operations according to the manufacturer's instructions. Cives shall demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the capture and control devices, as specified by the requirements in 40 C.F.R. § 63.11519(c)(4); and

ii. Cives shall implement one or more of the following management practices to minimize emissions of MFHAP, as practicable, while maintaining the required welding quality through the application of sound engineering judgment:

1) Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas (MIG) welding);
2) Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates;
3) Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;
4) Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated; and
5) Use a welding fume capture and control system, operated according to the manufacturer's specifications.

[40 C.F.R. § 63.11516(f)(1) and (2)]

b) If the total of the new and existing welding affected sources at Cives uses 2,000 pounds or more per year of welding rod containing one or more MFHAP (calculated on a rolling 12-month basis), Cives shall demonstrate that management practices or fume control measures are being implemented by complying with the following requirements. These requirements do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

i. Cives shall perform visual determinations of welding fugitive emissions as specified in 40 C.F.R. § 63.11517(b) at the primary vent, stack, exit, or opening from the building containing the welding operations. Cives shall keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in 40 C.F.R. § 63.11519(c)(2).

ii. If visible fugitive emissions are detected during any visual determination required by 40 C.F.R. § 63.11516(f)(3), Cives shall comply with the following requirements:

1) Perform corrective actions that include, but are not limited to, inspection of welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with 40 C.F.R. §63.11516(f)(2). After completing such corrective actions, Cives shall perform a follow-up inspection for visible fugitive emissions in accordance with 40 C.F.R § 63.11517(a), at the primary vent, stack, exit, or opening from the building containing the welding operations.
2) Report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, and submit with the facility's annual certification and compliance report as required by 40 C.F.R. § 63.11519(b)(5).

iii. If visible fugitive emissions are detected more than once during any consecutive 12-month period (notwithstanding the results of any follow-up inspections), Cives shall comply with the following:

1) Within 24 hours of the end of the visual determination of fugitive emissions in which visible fugitive emissions were detected, Cives shall conduct a visual determination of emissions opacity, as specified in 40 C.F.R. § 63.11517(c), at the primary vent, stack, exit, or opening from the building containing the welding operations.
2) In lieu of the requirement of 40 C.F.R. § 63.11516(f)(3) to perform visual determinations of fugitive emissions with EPA Method 22, Cives shall perform visual determinations of emissions opacity in accordance with 40 C.F.R. § 63.11517(d), using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.
3) Cives shall keep a record of each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, in accordance with the requirements in 40 C.F.R. § 63.11519(c)(3); and
4) Cives shall report the results of all visual determinations of emissions opacity performed in accordance with § 63.11516(f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, and submit with the facility's annual certification and compliance report as required by 40 C.F.R. § 63.11519(b)(6).

iv. For each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5) for which the average of

the six-minute average opacities recorded is 20% or less but greater than zero, Cives shall perform corrective actions, including inspection of all welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with § 63.11516(f)(2).

v. For each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5) for which the average of the six-minute average opacities recorded exceeds 20%, Cives shall comply with the following requirements:

1) Cives shall submit a report of exceedence of 20% opacity, along with the facility's annual certification and compliance report, as specified in 40 C.F.R. § 63.11519(b)(8), and according to the requirements of 40 C.F.R. § 63.11519(b)(1);
2) Within 30 days of the opacity exceedence, Cives shall prepare and implement a Site-Specific Welding Emissions Management Plan, as specified in 40 C.F.R. § 63.11516(f)(8). If Cives has already prepared a Site-Specific Welding Emissions Management Plan in accordance with this paragraph, the facility shall prepare and implement a revised Site-Specific Welding Emissions Management Plan within 30 days;
3) During the preparation (or revision) of the Site-Specific Welding Emissions Management Plan, Cives shall continue to perform visual determinations of emissions opacity, beginning on a daily schedule as specified in 40 C.F.R. § 63.11517(d), using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations;
4) Cives shall maintain records of daily visual determinations of emissions opacity performed in accordance with 40 C.F.R. 63.11516(f)(7)(iii), during preparation of the Site-Specific Welding Emissions Management Plan, in accordance with the requirements in 40 C.F.R. § 63.11519(b)(9); and
5) Cives shall include these records in the facility's annual certification and compliance report, according to the requirements of 40 C.F.R. § 63.11519(b)(1).

vi. The Site-Specific Welding Emissions Management Plan must comply with the following requirements:

1) Site-Specific Welding Emissions Management Plan must contain the following information:

(a) Company name and address;
(b) A list and description of all welding operations which currently comprise the welding affected source;
(c) A description of all management practices and/or fume control methods in place at the time of the opacity exceedence;
(d) A list and description of all management practices and/or fume control methods currently employed for the welding affected source;
(e) A description of additional management practices and/or fume control methods to be implemented pursuant to 40 C.F.R. §63.11516(f)(7)(ii) of this section, and the projected date of implementation; and
(f) Any revisions to a Site-Specific Welding Emissions Management Plan must contain copies of all previous plan entries, pursuant to 40 C.F.R. § 63.11516(f)(8)(i)(D) and (E).

2) The Site-Specific Welding Emissions Management Plan shall be updated annually to contain current information, as required by 40 C.F.R. § 63.11516(f)(8)(i)(A) through (C) of this section, and submitted with the facility's annual certification and compliance report, according to the requirements of 40 C.F.R. § 63.11519(b)(1); and
3) Cives shall maintain a copy of the current Site-Specific Welding Emissions Management Plan in the facility's records in a readily accessible location for inspector review, in accordance with the requirements in 40 C.F.R. § 63.11519(c)(12).

[40 C.F.R. § 63.11516(f)(3) through (8)]

c. Visible Emissions Requirements

When Cives is required to conduct visual emissions determinations, they shall be conducted according to the requirements and schedule detailed below.

(1) Visual Determination of Fugitive Emissions (cutting equipment, Plate Burning and Punching Machine, and Abrasive Blasting Operations)

(a) Visible Emissions Requirements

Cives shall have no visible fugitive emissions detected while these processes are in operation. [40 C.F.R. § 63.11517(b)]

(b) Testing Requirements

Visual determination of fugitive emissions must be performed according to the procedures of EPA Method 22, of 40 CFR part 60, Appendix A–7. Cives shall conduct the EPA Method 22 test while the affected source is operating under normal conditions. The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions shall be considered to be present if they are detected for more than six minutes of the 15-minute period. [40 C.F.R § 63.11517(a)]

(c) Testing Schedule

Visual determinations of fugitive emissions shall be performed according to the schedule below [40 C.F.R. § 63.11517(b)]

i. Daily Testing: Cives shall perform visual determination of fugitive emissions once per day, on each day the process is in operation, during operation of the process.

ii. Weekly Testing: If no visible fugitive emissions are detected in consecutive daily EPA Method 22 tests, performed in accordance with the "Daily Testing" requirement for 10 days of work day operation of the process, Cives may decrease the frequency of EPA Method 22 testing to once every five days of operation of the process (one calendar week). If visible fugitive emissions are detected during these tests, Cives shall resume EPA Method 22 testing of that operation once per day during each day that the process is in operation, in accordance with subpart i of this section.

iii. Monthly Testing: If no visible fugitive emissions are detected in four consecutive weekly EPA Method 22 tests performed in accordance with the "Weekly Testing" requirement, Cives may decrease the frequency of EPA Method 22 testing to once per 21 days of operation of the process (one calendar month). If visible fugitive emissions are detected during these tests, Cives shall resume weekly EPA Method 22 in accordance with subpart ii of this section.

iv. Quarterly Testing: If no visible fugitive emissions are detected in three consecutive monthly EPA Method 22 tests performed in accordance with the "Monthly Testing" requirement, Cives may decrease the frequency of EPA Method 22 testing to once per 60 days of operation of the process (3 calendar months). If visible fugitive emissions are

detected during these tests, Cives shall resume monthly EPA Method 22 in accordance with subpart iii of this section.

(2) Visual Determination of Emissions Opacity for Hand Welding Operations

(a) Visible Emissions Requirements

Visible Emissions from the Hand Welding Operations shall not exceed 20% opacity on a six-minute average basis. [40 C.F.R. § 63.11517 (d)]

(b) Testing Requirements

Visual determination of emissions opacity shall be performed in accordance with the procedures of EPA Method 9, of 40 C.F.R. Part 60, Appendix A-4. Cives shall conduct the EPA Method 9 test while the affected source is operating under normal conditions. The duration of the EPA Method 9 test shall be thirty minutes. [40 C.F.R § 63.11517(c)]

(c) Testing Schedule

Visual determinations of emissions opacity for welding shall be performed according to the schedule below. [40 C.F.R. § 63.11517(d)]

i. Daily testing: Cives shall perform visual determination of emissions opacity once per day during each day that the process is in operation.

ii. Weekly testing: If the average of the six-minute opacities recorded during any of the daily consecutive EPA Method 9 tests performed in accordance with i of this section does not exceed 20% for 10 days of operation of the process, Cives may decrease the frequency of EPA Method 9 testing to once per five days of consecutive work day operation. If opacity greater than 20% is detected during any of these tests, Cives shall resume testing every day of operation of the process according to the requirements of subpart i of this section.

iii. Monthly testing: If the average of the six-minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with ii of this section does not exceed 20% for four consecutive weekly tests, Cives may decrease the frequency of EPA Method 9 testing to once per every 21 days of operation of the process. If visible emissions opacity greater than 20% is detected during any monthly test, Cives shall resume testing every five days of operation of the process according to the requirements of subpart ii of this section.

iv. Quarterly testing: If the average of the six-minute opacities recorded during any of the consecutive weekly EPA Method 9 tests

performed in accordance with iii of this section does not exceed 20% for three consecutive monthly tests, Cives may decrease the frequency of EPA Method 9 testing to once per every 120 days of operation of the process. If visible emissions opacity greater than 20% is detected during any quarterly test, Cives shall resume testing every 21 days (month) of operation of the process according to the requirements of subpart iii of this section.

v. Switch to Method 22 testing: If, after two consecutive months of testing, the average of the six-minute opacities recorded during any of the monthly EPA Method 9 tests performed in accordance with subpart iii of this section does not exceed 20%, Cives may switch to performing visual determinations of emissions opacity using EPA Method 22 testing. In lieu of this, Cives may elect to continue performing EPA Method 9 tests in accordance with subparts iii and iv of this section.

d. Certification and Compliance Report [40 C.F.R. § 63.11519(b)]

(1) Cives shall prepare and submit each annual certification and compliance report to the EPA and the Department according to the dates below. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

a) The first annual certification and compliance report must cover the first annual reporting period which begins the day after the compliance date and ends on December 31.
b) Each subsequent annual certification and compliance report must cover the subsequent semiannual reporting period from January 1 through December 31.
c) Cives shall prepare and submit each annual certification and compliance report no later than January 31 and keep it in a readily-accessible location for inspector review. If an exceedence has occurred during the year, Cives shall also submit to the EPA and the Department the exceedence reports no later than January 31. The reports shall be postmarked or delivered no later than January 31.

(2) The annual certification and compliance report shall contain the following information.

a) Company name and address;
b) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;

c) Date of report and beginning and ending dates of the reporting period. The reporting period is the 12-month period ending on December 31. Note that the information reported for the 12 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation;

d) The date of every visual determination of fugitive emissions which resulted in detection of visible emissions, a description of the corrective actions taken subsequent to the test, and the date and results of the follow-up visual determination of fugitive emissions performed after the corrective actions.

e) The date of every visual determination of emissions opacity, the average of the six-minute opacities measured by the test, and a description of any corrective action taken subsequent to the test.

(3) Cives shall prepare an exceedence report whenever the average opacity exceeds 20%. Cives shall submit this report to the EPA and the Department along with the annual certification and compliance report. The report shall contain the date on which the exceedence occurred, and the average of the six-minute average opacities recorded during the visual determination of emissions opacity.

(4) Cives shall submit to the EPA and the Department a copy of the records of daily visual determinations of emissions recorded in accordance with the Tier 3 requirements for opacities exceeding 20% and a copy of the Site-Specific Welding Emissions Management Plan and any subsequent revisions to the plan.

e. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart XXXXXX including the following [40 C.F.R. § 63.11519(c)]:

(1) Copies of notifications and reports with supporting compliance documentation;

(2) Identification of each affected source (abrasive blasting, hand welding operations, etc.) and a list of equipment that is included in the affected source;

(3) Records of any changes made to equipment and on what date they occurred;

(4) Visual determination of fugitive emissions records;

(5) Visual determination of emissions opacity records;

(6) Records of the manufacturer's specifications and/or instructions for applicable equipment or control devices;

(7) Visual determination of emissions opacity during the preparation (or revision) of the Site-Specific Welding Emissions Management Plan; and

(8) Site-Specific Welding Emissions Management Plan.

Records shall be in a form suitable and readily available for expeditious review. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access to the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11519(c)(15)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart XXXXXX shall be streamlined to the more stringent six-year requirement.

E. Painting Operations

The painting operations at Cives is located in the main facility building. Cives applies industrial coatings including primers, intermediate coats, and topcoats to some of its steel products. The coatings are specified by Cives' customers and depend on the end use of the steel. The coatings provide corrosion protection and can include zinc-rich coatings, rust-inhibitive phenolics, and urethane resins. Painting operations at Cives have the potential to emit PM, HAP, and VOC emissions.

1. BACT Findings

Cives submitted a BACT analysis for control of emissions from the painting operations at the facility.

There are three categories of pollution control to consider for minimizing PM, HAP, and VOC emissions from the painting operations: (a) use of high-transfer efficiency coating equipment; (b) reduced VOC and HAP coatings; and (c) add-on pollution control devices.

a. High-Transfer Efficiency Coating Equipment

Possible coating application methods include flow coating, roller coating, dip coating, and spray coating. The primary and most technologically appropriate method of surface coating the various steel products fabricated at this facility is the use of spray coating. The use of flow coating, roller coating, or dip coating all have negligible PM emissions, but they are not feasible due to the size, shape, and variability of the steel components. High transfer efficiency spray coating options include air-atomized; high volume, low pressure (HVLP); airless; and electrostatic spray technologies.

An air-atomized applicator consists of a traditional spray gun that combines compressed air with liquid flow to create a pressurized mist for coating. Air-atomized applications are highly flexible and can be used on almost any kind of substrate. However, air-atomized spraying has the lowest transfer efficiency (approximately 50%) out of the above listed spray coating options.

HVLP spray guns use either a compressor or a turbine to deliver a high volume of low-pressure air to the gun applicator. Since the paint is released at a lower velocity, this technique yields less overspray and blowback than conventional air-atomized equipment, which yields a transfer efficiency of around 60%. HVLP applications require more experienced painters due to the higher transfer efficiency.

Airless application equipment forces the liquid coating through a narrow opening to create pressure. This method propels paint particles at a lower velocity than air-atomized equipment, which reduces the loss of paint through overspray. This method typically yields a transfer efficiency of 75-80% when coating flat surfaces. Airless spraying does require additional equipment maintenance as well as advanced skill on the part of the operator. Cives does currently use airless spray guns.

Electrostatic applicators charge the paint particles with high voltage, causing them to be attracted to the surface of the metal. The static pull of the coating to the metal surface significantly reduces the amount of overspray, which typically provides a transfer efficiency within the range of 75-95%. This allows for a smooth and solid coat with minimal effort. Electrostatic spraying can be employed alongside a variety of spray gun types, including those described previously. However, any recesses, corners, or areas that are difficult to access on the piece that is being coated can be missed due to the Faraday cage effect[3]. Electrostatic coating is more effective on flat or evenly contoured surfaces. This limitation can result in incomplete coverage in complex parts. For structural steel applications manufactured at Cives, inadequate coating applications can result in inadequate protection from degradation and corrosion resulting in structural weakness, reduced lifespan, and safety hazards.

b. Reduced VOC and HAP Coatings

A possible strategy for minimizing VOC and HAP emissions is to use reduced VOC and HAP coatings. The quantities of VOC and HAP emissions from the painting process are directly proportional to the quantities of VOC and HAP in the coatings.

[3] The Faraday cage effect happens when powder coating a part that has a tight angle or corner. Electricity follows a ground path of least resistance. The areas adjacent to the corner offer an easier, more accessible path, and thus the charged powder readily flows to those areas but does not flow as easily to the corners. [(2023). *Faraday Cage Effect - What is it in Powder Coating?* Prismatic Powders. https://www.prismaticpowders.com/knowledge-base/49/faraday-cage-effect-what-is-it-in-powder-coating]

After paint application, any volatile components evaporate to the atmosphere as the paint dries. Coatings with higher VOC and HAP content will have higher evaporative emissions of VOC and HAP. The coatings used at Cives comply with the VOC content limits established in *Surface Coating* Facilities 06-096 C.M.R. ch. 130, Section 4(F)(5), which is discussed in Part 5 of this section. The use of coatings with lower VOC or HAP content is not technically feasible due to the specifications of corrosion resistance and adhesions necessary when coating structural steel components.

c. Add-on Pollution Control Devices

Add-on control options include electrostatic precipitators (ESP), wet and dry scrubbers, thermal oxidizers, catalytic oxidizers, adsorption filters, and refrigerated condensers (RC).

An ESP uses an electrostatic charge to capture and collect overspray particles, which reduces PM emissions. Due to the nature of the paint emissions, a wet ESP would be required. ESPs are energy intensive and expensive to install. They also produce a wet, sticky, flammable waste.

Scrubbers use various mechanisms to capture and remove PM and VOC pollutants from the exhaust gas by either physical collection, chemical reaction, or biological reactions. Wet scrubbers work by wetting the exhaust gas to separate contaminants. There are many types of wet scrubbers, including spray towers, tray towers, packed bed scrubbers, and venturi scrubbers. Wet scrubbers are more effective at capturing PM pollutants and water-soluble gases than certain types of VOC and non-water-soluble pollutants. A biological scrubber would not withstand frequent startup, shutdowns, and prolonged periods of downtime, which is typical of the painting operations at Cives. Wet scrubbers also produce a significant waste stream.

Dry scrubbers remove acids from exhaust gases. First, the exhaust gases are cooled, which also dilutes the exhaust gas. Then, the gas is exposed to a combination of alkaline reagents in a sorbent mixture (e.g. hydrated lime, sodium bicarbonate, etc.), by either spraying the alkaline sorbent over the gas in a fine mist or by mixing the gas with the sorbent through a dry sorbent injection process. Finally, the pollutant-containing powder is filtered out through either a fabric filter or an ESP. Unlike wet scrubbers, dry scrubbers only remove acids from the exhaust gas, and they do not remove as many acids from the exhaust gas as wet scrubbers do.

Thermal oxidizers are combustion devices that raise the temperature of the painting operations' exhaust stream to oxidize (burn) or pyrolyze (thermally break down) VOC and HAP pollutants and convert them into less harmful substances like carbon dioxide and water vapor. Regenerative thermal oxidizers use various types of heat exchangers to preheat the exhaust and/or recover waste heat from the treated

exhaust. Catalytic oxidizers use a catalyst to accomplish destruction of VOC and HAP pollutants at a lower temperature and can improve destruction efficiency and decrease energy use. Thermal and catalytic oxidizers fire fuel, which could outweigh the environmental benefits of the VOC and HAP destruction.

Adsorption is the process of passing contaminated airstreams through a bed of adsorbent material, typically activated carbon, although other media may be suitable for certain applications. The contaminant molecule is held to the surface of the adsorbent by weak electrostatic forces. The contaminants are later desorbed by drawing a vacuum on the sorbent bed or purged using heated air, steam, or nitrogen, allowing collection and recovery of the solvent. These contaminants cannot be reused in the painting operations, so the recovered material becomes a waste. The cost of disposal would also add to the costs of adsorption. Another drawback of this approach is that the adsorbent typically binds strongly to heavy hydrocarbons and is less effective at capturing lighter weight organics. This means that it may be difficult to desorb some materials that are collected, which can foul the adsorbent over time.

An RC is a control device that cools a VOC-laden air stream to condense and remove VOC pollutants. It requires a high concentration of VOC in the air stream, is energy intensive, and produces waste. The amount of VOC vapors that escape is determined by both the vapor pressure of the condensed liquid (i.e., the partial pressure of the organic vapors in the emission stream) and the amount of air present in the emission stream. Theoretically, in order to achieve the highest level of control efficiency, the exhaust temperature would need to be brought to below the freezing point of the target organic compound. This approach is very energy intensive. As the temperature of the exhaust stream is cooled, the level of VOC is reduced to its dew point. Condensed compounds would then be recovered along with any moisture from the exhaust stream. In the case of the painting operations, the entire volume of the recovered condensate including VOC and water would become an additional waste stream, and the condensate might need to be kept cold and/or pressurized to prevent it from being re-volatilized.

d. BACT

Due to the size of the steel components, it is not technically feasible to conduct the painting operations in an enclosure and capture a non-dilute exhaust stream. Also, the magnitude of painting operations fluctuates greatly based on customer orders and steel end use. Painting can occur up to five days per week and can vary from just a couple hours per day to up to 19 hours per day. There can also be month-long periods where there are no painting operations. Many of the add-on pollution control devices discussed above do not function effectively with frequent startups and shutdowns or prolonged downtime.

The Department finds that BACT for painting operations at Cives is the following:

- The use of airless sprayers;
- The use of coatings that comply with 06-096 C.M.R. ch. 129, *Surface Coating Facilities*;
- Painting exclusively inside the Main Facility Building;
- A 12-month rolling total VOC emissions limit of 39.0 tons; and
- A 12-month rolling total HAP emissions limits of 9 tons for individual HAP and 24 tons for total HAPs.

2. Visible Emissions

   Visible emissions from painting operations within the Main Facility Building shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

3. Periodic Monitoring and Recordkeeping

   Periodic monitoring for the painting operations shall include recordkeeping to document spray coating material usage on both a monthly and 12-month rolling total basis. Cives shall calculate the VOC and HAP emissions from painting operations on a monthly and 12-month rolling total basis according to the material usage and VOC and HAP content of the coating materials according to the material data sheets for each product used. [06-096 C.M.R. ch. 115, BACT]

4. Additional BACT Findings

   All cleaning of paint spray guns shall be done with either gun cleaning solvents that contain neither VOC nor HAP components or in such a manner that an atomized mist of spray gun cleaning solvent and paint residue is not created outside of a container that collects the used gun cleaning solvent. [06-096 C.M.R. ch. 115, BACT]

5. NESHAP: 40 C.F.R. Part 63, Subpart XXXXXX

   Cives is subject to 40 C.F.R. Subpart XXXXXX, as discussed in section D(6) of this part. However, the coatings used in the painting operations at Cives do not contain MFHAP and are therefore not subject to Standards and Management Practices pertaining to spray painting in Subpart XXXXXX. [40 C.F.R. § 63.11514(b)(4)]

6. *Surface Coating Facilities*: 06-096 C.M.R. ch. 129

   Cives 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 but is

not limited to fabricated metal products, automotive or transportation equipment, commercial and industrial machinery and equipment, construction equipment, metal pipes, and other industrial and household products. [06-096 C.M.R. ch. 129 1(A) and 2(F)]

Under this regulation, Cives is subject to specific emission limits based on the type of coating applied.

a. Emission Limitations

Actual VOC emissions from the painting operations are expected to exceed 2.7 tons per year. As such, the emission limitations in Section 4 of 06-096 C.M.R. ch. 129 are applicable. Cives has elected to utilize Control Option 1, the use of low-VOC content coatings to be applied with one or more of the following application methods, and to comply with the VOC limits specified in Table 1 of 06-096 C.M.R. ch. 129, Section 4(F)(5):

(1) High volume-low pressure (HVLP) spray;
(2) Electrostatic spray;
(3) Zinc-arc spray;
(4) Air-assisted airless spray;
(5) Airless spray;
(6) A flow coating technique;
(7) Dip coat, including electrodeposition; or
(8) Another method with a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

Note: Cives uses Graco Silver Plus Airless spray guns which meets the criteria in (5) above: airless spray.

The components painted at Cives are air-dried. Therefore, Cives is limited to using coatings with VOC contents equal to or less than the values in Table 1 below (partially excerpted from 06-096 C.M.R. ch. 129, Section 4(F)(5)), as specified by coating category:

Table 1. Miscellaneous Metal Parts and Products VOC Content Limits

Coating Category	Air Dried	
	kg VOC/l coating	lb VOC/gal coating
General One Component	0.34	2.8
General Multi Component		
Etching Filler	0.42	3.5
Extreme High-Gloss		
Extreme Performance		
Heat-Resistant		
High Performance Architectural		
Prefabricated Architectural Multi-Component	0.42	3.5
Prefabricated Architectural One-Component		
Pretreatment Coatings		

The VOC limits specified in the above table for the coating of miscellaneous metal parts and products shall not apply to the following types of coatings and coating operations:

- Stencil coatings and
- Safety-indicating coatings.

[06-096 C.M.R. ch. 129 (4)(F)(5)]

The VOC emissions from the above operations shall be documented, recorded, and counted as part of the facility's VOC facility-wide total emissions. [06-096 C.M.R. ch. 115, BACT]

Also exempted from the requirements of the VOC-content limits shown above are operations involving the application of touchup or repair coatings and the application of textured finishes. [06-096 C.M.R. ch. 129 (4)(F)(4)]

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

(1) Cives shall use vapor-tight containers 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) 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.
(3) Cives shall collect all organic solvent used to clean spray guns into a container that is kept closed when material is not being added or removed.
(4) Cives shall pump or drain all organic solvent used for line cleaning into a container that is kept closed when material is not being added or removed.

(5) Cives shall control emissions from wash-off operations by using tanks that are kept closed when material is not being added or removed for wash-off, and minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.
[06-096 C.M.R. ch. 129 (5)]

c. Documentation of Method Compliance

Cives shall submit documentation to the Department certifying that they are utilizing the "low solvent content coating technology" compliance method to meet the VOC limits established in ch. 129. The documentation shall include:

(1) Name and location of surface coating facility;
(2) Name, address, and telephone number of the person responsible for the surface coating facility;
(3) Identification of each coating used and its coating classification;
(4) The mass of VOC per volume of each coating, excluding water and exempt compounds, as applied; and
(5) The time at which the surface coating facility's "day" begins if a time other than midnight, local time, is used to define a "day".

If Cives deviates from using the "low solvent content coating technology" compliance method to meet the VOC limits established in ch. 129, those changes shall be documented and submitted to the Department in accordance with the recordkeeping and reporting requirements in 06-096 C.M.R. ch. 129 (7)(A).
[06-096 C.M.R. ch. 129 (7)(A)]

d. Recordkeeping and Reporting

(1) Cives shall maintain all records necessary for demonstrating compliance with the applicable emission limitations in 06-096 C.M.R. ch. 129 for a period of six years. The records shall be made available to the Department for inspection during normal business hours, and Cives shall provide copies to the Department or the Environmental Protection Agency (EPA) upon request. [06-096 C.M.R. ch. 129 (7)]
(2) Cives shall submit certification records to the Department of each relevant coating unit, line, or operation, and the method to be used to maintain compliance with this rule upon the startup of any new coating unit, line, or operation, or upon changing the method of compliance used for the spray painting operations at Cives. [06-096 C.M.R. ch. 129 (7)(A)]
(3) Cives shall maintain monthly records on premises to document the name and identification of each coating used and the mass of VOC per volume of each coating, excluding water and exempt compounds, as applied, and the total emissions from the surface coating facility. [06-096 C.M.R. ch. 129 (7)(B)(2)]

(4) Cives shall perform testing and submit a report within ninety (90) days of receipt of notice from the Department if equipment operating parameters, staff inspection, air monitoring, or other cause indicate to the Department that the spray painting operations at Cives may be operating out of compliance with the emission limitations of ch. 129. The testing shall be in accordance with the procedures and methods described in Appendix A of ch. 129, Procedures A through C. [06-096 C.M.R. ch. 129 (6)]

(5) Cives shall notify the Department if VOC emissions generated at their surface coating facility were in excess of the emission limitations in ch. 129 for:

(i) Any exempt surface coating operations that exceeded the applicability threshold in Subsection 1(C) of this chapter; or
(ii) Any evidence showing excess emissions, or the use of any coatings that do not use the low solvent content coating technology.

The notification shall be in writing and shall be submitted within 30 days of the date of the occurrence. [06-096 C.M.R. ch. 129 (8)(B)(1) and (2)]

(6) Notwithstanding the requirements of 06-096 C.M.R. ch. 129, Cives may use, in the aggregate, up to 50 gallons of coatings that exceed the emissions limitations set forth in chapter 129, for any 12 consecutive months, provided Cives maintains records of such coatings in accordance with Subsection 7(B)(2) of 06-096 C.M.R. ch. 129. [06-096 C.M.R. ch. 129 (4)(G)]

F. Parts Washer

The parts washer has a design capacity of 25 gallons and uses a solvent with 100% VOC content. The parts washer is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130, and records shall be kept documenting compliance.

This equipment is exempt from *Industrial Cleaning Solvents*, 06-096 C.M.R. ch. 166 pursuant to Section (3)(B).

G. General Process Emissions

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

H. Fugitive Emissions

Cives shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

Cives shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

I. Emission Statements

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

1. The amount of propane fired in Area Heaters #1, #2, and #3 (each) on a monthly basis; and
2. Calculations of the VOC and HAP emissions from the paint operations on a calendar year total basis.

In reporting year 2026 and every third year thereafter, Cives 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. Cives 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)]

J. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on operating the area heaters for 8,760 hr/yr and a VOC limit of 39.0 tpy from painting operations.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Area Heater #1	0.3	0.3	0.3	--	0.8	0.4	0.1
Area Heater #2	0.3	0.3	0.3	--	0.8	0.4	0.1
Area Heater #3	0.3	0.3	0.3	--	0.8	0.4	0.1
Paint Operations	--	--	--	--	--	--	39.0
Total TPY	**0.9**	**0.9**	**0.9**	**--**	**2.4**	**1.2**	**39.3**

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

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
$PM_{2.5}$	15
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.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Cives to submit additional information and may require an ambient air quality impact analysis at that time.

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-1175-71-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 beginning actual 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 the written test report by the Department, or another alternative timeframe approved by the Department, 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 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]

(16) The licensee 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). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Area Heaters #1, #2, and #3**

A. AH #1, AH #2, and AH #3 are licensed to fire propane. [06-096 C.M.R. ch. 115, BACT]

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
AH #1	0.06	0.06	0.06	0.001	0.18	0.10	0.01
AH #2	0.06	0.06	0.06	0.001	0.18	0.10	0.01
AH #3	0.06	0.06	0.06	0.001	0.18	0.10	0.01

C. Visible emissions from AH #1, AH #2, and AH #3 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

(18) **Steel Manufacturing**

A. Cutting Equipment

1. Cives shall comply with Subpart XXXXXX standards and management practices for the cutting equipment operations outlined in part F(1)(a) of this section. [06-096 C.M.R. ch. 115, BACT]
2. Visible emissions from the cutting equipment shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

B. Fume Extractors

1. Cives shall operate the Fume Extractors in the facility building during operations to reduce emissions to the outside.
2. The Fume Extractors' filters shall be routinely monitored by checking their H_2O magnehelic gages. When the differential pressure reaches 3.5-4 inches, the external filter must be cleaned, and the interior filters (main filter) changed.

3. The Fume Extractors' filters shall be cleaned and changed at least monthly, regardless of the differential pressure.
4. All corrective or preventative maintenance performed on the Fume Extractors shall be documented in a maintenance log and made available to the Department upon request.

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

C. Abrasive Blasting Machine

1. A material recovery and recirculation system shall be used to recycle abrasive material and remove debris.
2. The inlet dust collector shall be inspected at least monthly, and filters shall be replaced as required. During each shift, Cives' operators shall monitor the dust collection system and verify levels in the 55-gallon drums and change them out as necessary.
3. Inspection and review of the recovery and recirculation system shall take place at least monthly. The system shall be monitored each shift by Cives' operators. Any issue noted shall be reported to maintenance, and inspection and repairs shall be completed as necessary.
4. The dust collection system shall be equipped with cartridge filters with a design PM control efficiency of 99.9%. The dust collection system's filters shall be checked at least monthly and changed as required.
5. Cives shall have an effective maintenance, inspection, and filter replacement program for the dust collector and its dust collection shed. The dust collecting drums levels in the shed shall be monitored and the drums emptied before they are filled to capacity.
6. The inlet of the Wheelabrator shall be further controlled by a dust collector which discharges to an outdoor dust collection shed equipped with filters to collect dust in a 55-gallon drum.
   [06-096 C.M.R. ch. 115, BACT]

D. Plate Burning and Punching Machine

1. Cives shall operate the Peddinghaus dust collection system to minimize dust from the Plate Burning and Punching Machine. The Peddinghaus dust collection system shall be equipped with cartridge filters with a design PM control efficiency of 99.9%.
2. The filters shall be routinely monitored during system operation by checking their H_2O magnehelic gages. When the differential pressure reaches 6.5-7 inches, the filters shall be changed.
3. The filters shall be changed annually, regardless of differential pressure.

4. All corrective or preventative maintenance performed on the dust collection system shall be documented in a maintenance log and made available to the Department upon request.

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

5. Visible emissions from the Plate Burning and Punching Machine shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

E. Hand Welding Operations

MFHAP emissions from hand welding shall be contained within the building and controlled by fume extractors that vent internally within the building. [06-096 C.M.R. ch. 115, BACT]

F. Cives shall comply with all requirements of 40 C.F.R. Part 60, Subpart XXXXXX, applicable to the Steel Manufacturing Operations including, but not limited to, the following:

1. Standards and Management Practices

a. Cutting Equipment, Plate Burning and Punching Machine [40 C.F.R. §63.11516(b)]

Cives shall implement management practices to minimize emissions of MFHAP as specified below. These requirements do not apply when machining operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.

(1) Cives shall take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable.
(2) Cives shall operate all equipment associated with machining according to manufacturer's instructions.

b. Dry Abrasive Blasting

Cives shall comply with the following requirements [40 C.F.R. § 63.11516(a)]:

(1) Cives shall capture emissions and vent them to a filtration control device.
(2) Cives shall operate the filtration control device according to manufacturer's instructions and demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices.

(3) Cives shall implement management practices to minimize emissions of MFHAP as specified below.

i. Take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

ii. Enclose dusty abrasive material storage areas and holding bins, seal chutes, and conveyors that transport abrasive materials; and

iii. Operate all equipment associated with dry abrasive blasting operations according to the manufacturer's instructions.

c. Hand Welding Operations

(1) For each new or existing welding affected source at Cives that uses materials containing one or more MFHAP or has the potential to emit MFHAP, Cives shall comply with the following requirements. These requirements do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

i. Cives shall operate all equipment and capture and control devices associated with welding operations according to manufacturer's instructions. Cives shall demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the capture and control devices, as specified by the requirements in 40 C.F.R. § 63.11519(c)(4); and

ii. Cives shall implement one or more of the following management practices to minimize emissions of MFHAP, as practicable, while maintaining the required welding quality through the application of sound engineering judgment:

a) Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas (MIG) welding);

b) Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates;

c) Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;

d) Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated; and

e) Use a welding fume capture and control system, operated according to the manufacturer's specifications.

[40 C.F.R. § 63.11516(f)(1) and (2)]

(2) If the total of the new and existing welding affected sources at Cives uses 2,000 pounds or more per year of welding rod containing one or more MFHAP (calculated on a rolling 12-month basis), Cives shall demonstrate that management practices or fume control measures are being implemented by complying with the following requirements. These requirements do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

i. Cives shall perform visual determinations of welding fugitive emissions as specified in 40 C.F.R. § 63.11517(b) at the primary vent, stack, exit, or opening from the building containing the welding operations. Cives shall keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in 40 C.F.R. § 63.11519(c)(2).

ii. If visible fugitive emissions are detected during any visual determination required by 40 C.F.R. § 63.11516(f)(3), Cives shall comply with the following requirements:

iii. Perform corrective actions that include, but are not limited to, inspection of welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with 40 C.F.R. §63.11516(f)(2). After completing such corrective actions, Cives perform a follow-up inspection for visible fugitive emissions in accordance with 40 C.F.R § 63.11517(a), at the primary vent, stack, exit, or opening from the building containing the welding operations.

iv. Report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, and submit with the facility's annual certification and compliance report as required by 40 C.F.R. § 63.11519(b)(5).

v. If visible fugitive emissions are detected more than once during any consecutive 12-month period (notwithstanding the results of any follow-up inspections), Cives shall comply with the following:

a) Within 24 hours of the end of the visual determination of fugitive emissions in which visible fugitive emissions were detected, Cives shall conduct a visual determination of emissions opacity, as specified in 40 C.F.R. § 63.11517(c), at the primary vent, stack, exit, or opening from the building containing the welding operations.

b) In lieu of the requirement of 40 C.F.R. § 63.11516(f)(3) to perform visual determinations of fugitive emissions with EPA Method 22, Cives shall perform visual determinations of emissions opacity in accordance with 40 C.F.R. § 63.11517(d), using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.

c) Cives shall keep a record of each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, in accordance with the requirements in 40 C.F.R. § 63.11519(c)(3); and

d) Cives shall report the results of all visual determinations of emissions opacity performed in accordance with § 63.11516(f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, and submit with the facility's annual certification and compliance report as required by 40 C.F.R. § 63.11519(b)(6).

vi. For each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5) for which the average of the six-minute average opacities recorded is 20% or less but greater than zero, Cives shall perform corrective actions, including inspection of all welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with § 63.11516(f)(2).

vii. For each visual determination of emissions opacity performed in accordance with 40 C.F.R. § 63.11516(f)(5) for which the average of the six-minute average opacities recorded exceeds 20%, Cives shall comply with the following requirements:

a) Submit a report of exceedence of 20% opacity, along with the facility's annual certification and compliance report, as specified in 40 C.F.R. § 63.11519(b)(8), and according to the requirements of 40 C.F.R. § 63.11519(b)(1);

b) Within 30 days of the opacity exceedence, prepare and implement a Site-Specific Welding Emissions Management Plan, as specified in 40 C.F.R. § 63.11516(f)(8). If Cives has already prepared a Site-Specific Welding Emissions Management Plan in accordance with this paragraph, the facility shall prepare and implement a revised Site-Specific Welding Emissions Management Plan within 30 days;

c) During the preparation (or revision) of the Site-Specific Welding Emissions Management Plan, Cives shall continue to perform visual determinations of emissions opacity, beginning on a daily schedule as specified in 40 C.F.R. § 63.11517(d), using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations;

d) Maintain records of daily visual determinations of emissions opacity performed in accordance with 40 C.F.R. 63.11516(f)(7)(iii), during preparation of the Site-Specific Welding Emissions Management Plan, in accordance with the requirements in 40 C.F.R. § 63.11519(b)(9); and

e) Include these records in the facility's annual certification and compliance report, according to the requirements of 40 C.F.R. § 63.11519(b)(1).

viii. Cives must comply with the following requirements for their Site-Specific Welding Emissions Management Plan:

a) The Site-Specific Welding Emissions Management Plan must contain the following information:

- Company name and address;
- A list and description of all welding operations which currently comprise the welding affected source;
- A description of all management practices and/or fume control methods in place at the time of the opacity exceedence;
- A list and description of all management practices and/or fume control methods currently employed for the welding affected source;
- A description of additional management practices and/or fume control methods to be implemented pursuant to 40 C.F.R. §63.11516(f)(7)(ii) of this section, and the projected date of implementation; and
- Any revisions to the Site-Specific Welding Emissions Management Plan must contain copies of all previous plan entries, pursuant to 40 C.F.R. § 63.11516(f)(8)(i)(D) and (E).

b) The Site-Specific Welding Emissions Management Plan shall be updated annually to contain current information, as required by 40 C.F.R. § 63.11516(f)(8)(i)(A) through (C) of this section, and submitted with the facility's annual certification and compliance report, according to the requirements of 40 C.F.R. § 63.11519(b)(1); and

c) Cives shall maintain a copy of the current Site-Specific Welding Emissions Management Plan in the facility's records in a readily accessible location for inspector review, in accordance with the requirements in 40 C.F.R. § 63.11519(c)(12).

[40 C.F.R. § 63.11516(f)(3) through (8)]

2. Visible Emissions Requirements

When Cives is required to conduct visual emissions determinations, they shall be conducted according to the requirements and schedule detailed below.

a. Visual Determination of Fugitive Emissions (cutting equipment, Plate Burning and Punching Machine, and Abrasive Blasting Operations)

(1) Visible Emissions Requirements

Cives shall have no visible fugitive emissions detected while these processes are in operation. [40 C.F.R. § 63.11517(b)]

(2) Testing Requirements

Visual determination of fugitive emissions must be performed according to the procedures of EPA Method 22, of 40 CFR part 60, Appendix A–7. Cives shall conduct the EPA Method 22 test while the affected source is operating under normal conditions. The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions shall be considered to be present if they are detected for more than six minutes of the 15-minute period. [40 C.F.R § 63.11517(a)]

(3) Testing Schedule

Visual determinations of fugitive emissions shall be performed according to the schedule below [40 C.F.R. § 63.11517(b)]

i. Daily Testing: Cives shall perform visual determination of fugitive emissions once per day, on each day the process is in operation, during operation of the process.

ii. Weekly Testing: If no visible fugitive emissions are detected in consecutive daily EPA Method 22 tests, performed in accordance with the "Daily Testing" requirement for 10 days of work day operation of the process, Cives may decrease the frequency of EPA Method 22 testing to once every five days of operation of the process (one calendar week). If visible fugitive emissions are detected during these tests, Cives shall resume EPA Method 22 testing of that operation once per day during each day that the process is in operation, in accordance with subpart i of this section.

iii. Monthly Testing: If no visible fugitive emissions are detected in four consecutive weekly EPA Method 22 tests performed in accordance with the "Weekly Testing" requirement, Cives may decrease the frequency of EPA Method 22 testing to once per 21 days of operation of the

process (one calendar month). If visible fugitive emissions are detected during these tests, Cives shall resume weekly EPA Method 22 in accordance with subpart ii of this section.

iv. Quarterly Testing: If no visible fugitive emissions are detected in three consecutive monthly EPA Method 22 tests performed in accordance with the "Monthly Testing" requirement of this section, Cives may decrease the frequency of EPA Method 22 testing to once per 60 days of operation of the process (3 calendar months). If visible fugitive emissions are detected during these tests, Cives shall resume monthly EPA Method 22 in accordance with subpart iii of this section.

b. Visual Determination of Emissions Opacity for Hand Welding Operations

(1) Visible Emissions Requirements

Visible Emissions from the Hand Welding Operations shall not exceed 20% on a six-minute average basis [40 C.F.R. § 63.11517 (d)]

(2) Testing Requirements

Visual determination of emissions opacity shall be performed in accordance with the procedures of EPA Method 9, of 40 C.F.R. part 60, Appendix A-4. Cives shall conduct the EPA Method 9 test while the affected source is operating under normal conditions. The duration of the EPA Method 9 test shall be thirty minutes. [40 C.F.R § 63.11517(c)]

(3) Testing Schedule

Visual determinations of emissions opacity for welding shall be performed according to the schedule below. [40 C.F.R. § 63.11517(d)]

i. Daily testing: Cives shall perform visual determination of emissions opacity once per day during each day that the process is in operation.

ii. Weekly testing: If the average of the six-minute opacities recorded during any of the daily consecutive EPA Method 9 tests performed in accordance with i of this section does not exceed 20% for 10 days of operation of the process, Cives may decrease the frequency of EPA Method 9 testing to once per five days of consecutive work day operation. If opacity greater than 20% is detected during any of these tests, Cives shall resume testing every day of operation of the process according to the requirements of subpart i of this section.

iii. Monthly testing: If the average of the six-minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with ii of this section does not exceed 20% for four

consecutive weekly tests, Cives may decrease the frequency of EPA Method 9 testing to once per every 21 days of operation of the process. If visible emissions opacity greater than 20% is detected during any monthly test, Cives shall resume testing every five days of operation of the process according to the requirements of subpart ii of this section.

iv. Quarterly testing: If the average of the six-minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with iii of this section does not exceed 20% for three consecutive monthly tests, Cives may decrease the frequency of EPA Method 9 testing to once per every 120 days of operation of the process. If visible emissions opacity greater than 20% is detected during any quarterly test, Cives shall resume testing every 21 days (month) of operation of the process according to the requirements of subpart iii of this section.

v. Switch to Method 22 testing: If, after two consecutive months of testing, the average of the six-minute opacities recorded during any of the monthly EPA Method 9 tests performed in accordance with subpart iii of this section does not exceed 20%, Cives may switch to performing visual determinations of emissions opacity using EPA Method 22 testing. In lieu of this, Cives may elect to continue performing EPA Method 9 tests in accordance with subparts iii and iv of this section.

3. Certification and Compliance Report [40 C.F.R. § 63.11519(b)]

a. Cives shall prepare and submit each annual certification and compliance report according to the dates below. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(1) The first annual certification and compliance report must cover the first annual reporting period which begins the day after the compliance date and ends on December 31.
(2) Each subsequent annual certification and compliance report must cover the subsequent semiannual reporting period from January 1 through December 31.
(3) Cives shall prepare and submit each annual certification and compliance report no later than January 31 and keep it in a readily-accessible location for inspector review. If an exceedence has occurred during the year, Cives shall also submit the exceedence reports no later than January 31. The reports shall be postmarked or delivered no later than January 31.

b. The annual certification and compliance report shall contain the following information.

(1) Company name and address;
(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
(3) Date of report and beginning and ending dates of the reporting period. The reporting period is the 12-month period ending on December 31. Note that the information reported for the 12 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation;
(4) The date of every visual determination of fugitive emissions which resulted in detection of visible emissions, a description of the corrective actions taken subsequent to the test, and the date and results of the follow-up visual determination of fugitive emissions performed after the corrective actions; and
(5) The date of every visual determination of emissions opacity, the average of the six-minute opacities measured by the test and a description of any corrective action taken subsequent to the test.

c. Cives shall prepare an exceedence report whenever the average opacity exceeds 20%. Cives shall submit this report along with the annual certification and compliance report. The report shall contain the date on which the exceedence occurred, and the average of the six-minute average opacities recorded during the visual determination of emissions opacity.

d. Cives shall submit a copy of the records of daily visual determinations of emissions recorded in accordance with the Tier 3 requirements for opacities exceeding 20% and a copy of the Site-Specific Welding Emissions Management Plan and any subsequent revisions to the plan.

4. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart XXXXXX including the following [40 C.F.R. § 63.11519(c)]:

a. Copies of notifications and reports with supporting compliance documentation;

b. Identification of each affected source (abrasive blasting, hand welding operations, etc.) and a list of equipment that is included in the affected source;

c. Records of any changes made to equipment and on what date they occurred;

d. Visual determination of fugitive emissions records;

e. Visual determination of emissions opacity records;

f. Records of the manufacturer's specifications and/or instructions for applicable equipment or control devices;

g. Visual determination of emissions opacity performed during the preparation (or revision) of the Site-Specific Welding Emissions Management Plan; and

h. Site-Specific Welding Emissions Management Plan.

Records shall be in a form suitable and readily available for expeditious review. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11519(c)(15)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart XXXXXX shall be streamlined to the more stringent six-year requirement.

(19) **Painting Operations**

A. Emission Limits and Compliance Demonstration

1. Cives shall use airless sprayers for their painting operations and paint exclusively indoors.
2. Cives shall keep a 12-month rolling total VOC emissions limit of 39.0 tons, and a 12-month rolling total HAP emissions limit of 9.9 tons for individual HAP and 24.9 tons for combined HAPs.
3. Cives shall maintain records to document spray coating material usage on both a monthly and 12-month rolling total basis.
4. Cives shall calculate VOC and HAP emissions from painting operations on a monthly and 12-month rolling total basis according to the material usage and VOC and HAP content of the coating materials according to the material data sheets for each product used.
5. All cleaning of paint spray guns shall be done with either non-VOC and non-HAP gun cleaning solvents or in such a manner that an atomized mist of spray of gun cleaning solvent and paint residue is not created outside of a container that collects the used gun cleaning solvent.

B. Visible Emissions

Visible emissions from painting operations shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

C. *Surface Coating Facilities*: 06-096 C.M.R. ch. 129

1. Cives shall use Control Option 1 as described in 06-096 C.M.R. ch. 129(4)(F)(2)(a), in conjunction with one or more of the application methods identified in 06-096 C.M.R. ch. 129 (4)(F)(3), as the method of achieving the VOC limits specified in 06-096 C.M.R. ch. 129 (4)(F)(5) for painting operations. [06-096 C.M.R. ch. 129 (4)(F)]
2. Cives shall only use coatings with VOC equal to or less than the values as specified by coating category, as listed in Table 1 below. [06-096 C.M.R. ch. 129(4)(F)(5).

Table 1. Miscellaneous Metal Parts and Products VOC Content Limits

Coating Category	Air Dried	
	kg VOC/l coating	lb VOC/gal coating
General One Component	0.34	2.8
General Multi Component		
Etching Filler	0.42	3.5
Extreme High-Gloss		
Extreme Performance		
Heat-Resistant		
High Performance Architectural		
Prefabricated Architectural Multi-Component	0.42	3.5
Prefabricated Architectural One-Component		
Pretreatment Coatings		

The VOC limits specified in the above table for the coating of miscellaneous metal parts and products shall not apply to the following types of coatings and coating operations:

a. Stencil coatings and
b. Safety-indicating coatings.

[06-096 C.M.R. ch. 129 (4)(F)(5)]

The VOC emissions from the above operations shall be documented, recorded, and counted as part of the facility's VOC facility-wide total emissions. [06-096 C.M.R. ch. 115, BACT]

The requirements of the VOC-content limits shown above do not apply to operations involving the application of touchup or repair coatings and the application of textured finishes. [06-096 C.M.R. ch. 129 (4)(F)(4)]

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

   a. Cives shall use vapor-tight containers 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.
   b. 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.
   c. Cives shall collect all organic solvent used to clean spray guns into a container that is kept closed when material is not being added or removed.
   d. Cives shall pump or drain all organic solvent used for line cleaning into a container that is kept closed when material is not being added or removed.
   e. Cives shall control emissions from wash-off operations by using tanks that are kept closed when material is not being added or removed for wash-off, and minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

   [06-096 C.M.R. ch. 129 (5)]

4. Documentation of Method Compliance

   Cives shall submit documentation to the Department certifying that they are utilizing the "low solvent content coating technology" compliance method to meet the VOC limits established in ch. 129. The document shall include:

   a. Name and location of surface coating facility;
   b. Name, address, and telephone number of the person responsible for the surface coating facility;
   c. Identification of each coating used and its coating classification;
   d. The mass of VOC per volume of each coating, excluding water and exempt compounds, as applied; and
   e. The time at which the surface coating facility's "day" begins if a time other than midnight, local time, is used to define a "day".

   If Cives deviates from using the "low solvent content coating technology" compliance method to meet the VOC limits established in ch. 129, those changes shall be documented and submitted to the Department in accordance with the recordkeeping and reporting requirements in 06-096 C.M.R. ch. 129 (7)(A).
   [06-096 C.M.R. ch. 129 (7)(A)]

5. Recordkeeping and Reporting

   a. Cives shall maintain all records necessary for demonstrating compliance with the applicable emission limitations in 06-096 C.M.R. ch. 129 for a period of six years. The records shall be made available to the Department for inspection during normal business hours, and Cives shall provide copies to the Department or the Environmental Protection Agency (EPA) upon request. [06-096 C.M.R. ch. 129 (7)]
   b. Cives shall submit certification records to the Department of each relevant coating unit, line, or operation, and the method to be used to maintain compliance with this rule upon the startup of any new coating unit, line, or operation, or upon changing the method of compliance used for the spray painting operations at Cives. [06-096 C.M.R. ch. 129 (7)(A)]
   c. Cives shall maintain monthly records on premises to document the name and identification of each coating used and the mass of VOC per volume of each coating, excluding water and exempt compounds, as applied, and the total emissions from the surface coating facility. [06-096 C.M.R. ch. 129 (7)(B)(2)]
   d. Cives shall perform testing and submit a report within ninety (90) days of receipt of notice from the Department if equipment operating parameters, staff inspection, air monitoring, or other cause indicate to the Department that the spray painting operations at Cives may be operating out of compliance with the emission limitations of ch. 129. The testing shall be in accordance with the procedures and methods described in Appendix A of ch. 129, Procedures A through C. [06-096 C.M.R. ch. 129 (6)]
   e. Cives shall notify the Department if VOC emissions generated at their surface coating facility were in excess of the emission limitations in ch. 129 for:

      (iii) Any exempt surface coating operations that exceeded the applicability threshold in Subsection 1(C) of this chapter; or
      (iv) Any evidence showing excess emissions, or the use of any coatings that do not use the low solvent content coating technology.

      The notification shall be in writing and shall be submitted within 30 days of the date of the occurrence. [06-096 C.M.R. ch. 129 (8)(B)(1) and (2)]

   f. Notwithstanding the requirements of 06-096 C.M.R. ch. 129, Cives may use, in the aggregate, up to 50 gallons of coatings that exceed the emissions limitations set forth in chapter 129, for any 12 consecutive months, provided Cives maintains records of such coatings in accordance with Subsection 7(B)(2) of 06-096 C.M.R. ch. 129. [06-096 C.M.R. ch. 129 (4)(G)]

(20) **Parts Washer**

The Parts Washer at Cives is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130.

A. Cives shall keep records of the amount of solvent added to the parts washer. [06-096 C.M.R. ch. 115, BPT]

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. Cives shall attach a permanent conspicuous label to the unit summarizing the following operational standards:
      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. The parts washer shall be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent.

[06-096 C.M.R. ch. 130]

(21) **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. 101, § 4(B)(4)]

(22) **Fugitive Emissions**

1. Cives shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

2. Cives shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

(23) **Annual Emission Statements**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Cives 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. Cives shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of propane fired in Area Heaters #1, #2, and #3 (each) on a monthly basis; and
2. Calculations of the VOC and HAP emissions from the paint operations on a calendar year total basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2026 and every third year thereafter, Cives shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). Cives 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)]

(24) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Cives may be required to submit additional information. Upon written request from the Department, Cives shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.
[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 2nd DAY OF JULY, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, 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: November 13, 2023
Date of application acceptance: November 13, 2023

Date filed with the Board of Environmental Protection:

This Order prepared by Kendra Nash, Bureau of Air Quality.

FILED

JUL 02, 2024

State of Maine
Board of Environmental Protection