



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

**C&L Aerospace Holdings, LLC
d/b/a C&L Aviation Services
Penobscot County
Bangor, Maine
A-1093-71-B-M (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

C&L Aerospace Holdings LLC, doing business as C&L Aviation Services (C&L Aviation), was issued Air Emission License A-1093-71-A-N on 01/15/2014, permitting the operation of emission sources associated with their aircraft maintenance and repair facility.

C&L Aviation Services has requested a minor revision to their license in order to make the following adjustments:

- Include information and emission limits for C&L Aviation's two make-up air units,
- Establish new stack identification,
- Document an increased maximum process rate for Paint Hanger #1 (PH-1),
- Change VOC/HAP tracking and compliance documentation methods, and
- Clarify annual HAP reporting requirement from License A-1093-71-A-N.

The equipment addressed in this amendment is located at 112 Polk Street, Bangor, Maine.

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

BANGOR
106 HOGAN ROAD, SUITE 6
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312 CANCO ROAD
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
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B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Date of...</u>		<u>Stack #</u>
				<u>Manufacture</u>	<u>Installation</u>	
MAU-1 (Make-up Air Unit)	4.32 MMBtu/hr	4235	Natural Gas, Negligible	2014	2014	NA
MAU-2 (Make-up Air Unit)	4.32 MMBtu/hr	4235	Natural Gas, Negligible	2014	2014	NA
EVAP-1 (Wastewater Evaporator)	0.327 MMBtu/hr	321	Natural Gas, Negligible	2014	2014	EVAP-1 ¹

Process Equipment¹

<u>Emission Unit ID</u>	<u>Equipment</u>	<u>Maximum Raw Material Process Rate</u>	<u>Date of...</u>		<u>Control Device</u>	<u>Stack #²</u>
			<u>Manufacture</u>	<u>Installation</u>		
PB-1	Primer Paint Booth	0.13 gal/hour primer	2014	2014	HVLP paint gun	EXH01 ¹
PB-2	Topcoat Paint Booth	0.25 gal/hour topcoat	2014	2014	HVLP paint gun	EXH02 ¹
PH-1	Stripper Application (Hangar)	9.4 gal/hour stripper³	2014	2014	Airless pump	EXH03 ¹
PH-2	Primer Application (Hangar)	6.9 gal/hour primer	2014	2014	Electrostatic spray	EXH04 ¹
PH-3	Topcoat Application (Hangar)	9.25 gal/hour topcoat	2014	2014	Electrostatic spray	EXH05 ¹
PH-4	Gun Solvent Use (Hangar)	15.2 gal/hour gun solvent	2014	2014	NA	As needed
PH-5	Wash Solvent Use (Hangar)	18.75 gal/hour wash solvent	2014	2014	NA	As needed

¹ **Bolded** values are being introduced in this license. There will be no mention of these changes past this section.

² Stack construction was still in the bidding stage when the initial license was drafted.

³ The Maximum Raw Material Process Rate for PH-1 was adjusted from 4.2 gal/hr to 9.4 gal/hr

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant not including greenhouse gases (GHG) and less than 8 ton/year for all pollutants combined not including GHG. Therefore, this modification is determined to be a minor revision and has been processed as such.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Definitions Regulation, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Make-up Air Units (MAU-1 and MAU-2)

In the initial license application, it was estimated that the Make-up Air Units would each have a maximum firing capacity of less than 1.0 MMBtu/hr and therefore not be required to be included in the air emission license. However, the Make-up Air Units purchased and installed by C&L Aviation after receiving their air emission license have maximum firing capacities of 4.32 MMBtu/hr each. Both Make-up Air Units fire natural gas. The units vent into the building; thus emissions from these units are considered fugitive emissions.

BACT Findings

C&L Aviation has supplied a BACT analysis for the MAU-1 and MAU-2 units.

The BACT emission limits for the Make-up Air Units were based on the following:

Natural Gas

- PM – 0.05 lb/MMBtu based on 06-096 CMR 115, BACT
- PM₁₀ – 0.05 lb/MMBtu based on 06-096 CMR 115, BACT
- SO₂ – 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- NO_x – 100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- CO – 84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- VOC – 5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- Opacity – 06-096 CMR 101

The BACT emission limits for the Make-up Air Units are the following:

Unit	Pollutant	lb/MMBtu
MAU-1	PM	0.05
MAU-2	PM	0.05

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)
MAU-1 natural gas	0.22	0.22	0.22	0.01	0.42	0.36	0.02
MAU-2 natural gas	0.22	0.22	0.22	0.01	0.42	0.36	0.02

Visible emissions from MAU-1 and MAU-2 shall not exceed 10% opacity on a six minute block average basis. This limit pertains to all ventilation directed outside. [06-096 CMR 115, BACT]

C. Coating Operations

C&L Aviation has requested a change in the way that their VOC and HAP emissions are limited and how they are tracked. In initial licensing of the facility, paint stripping, spray primers, spray topcoats, gun cleaning solvents, and wash solvents were all limited by total volume of use and on maximum allowable VOC and HAP contents.

C&L Aviation will maintain yearly license limits of 47.5 TPY of VOC and 2.4 TPY of HAP, on a 12-month rolling total basis, for its coating operations; however, due to necessary variation in operation and inconsistency in VOC and HAP contents of materials, it will no longer be limited based on individual volumes or VOC/HAP contents of the coating products. Instead, C&L Aviation will be limited based on total output of VOC and HAP, allowing them operational flexibility while still ensuring that they meet their license limits.

To demonstrate compliance with the 12-month rolling total limits, C&L shall record the quantity of each product associated with the coating process, including paint stripping, spray primers, spray topcoats, gun cleaning solvents, and wash solvents used at the facility on an as-used basis or using other methods approved by the Department. C&L shall also record the VOC and HAP content of each product used. Volatile HAP content shall be assumed to be 100% released; however, for non-volatile HAPS, release percent can be calculated using the HVLP guns' PM control efficiencies. Because painting happens solely in spray booths and in the hanger, which is kept under negative pressure during coating operations, the PM control efficiency of the building's filter may also be applied to the calculation for non-volatile HAP emissions.

C&L shall use the following calculation method with the new recording method:

$$\text{Monthly VOC/HAP Emissions} = \sum_{i=1}^n (\text{Product Usage} \times \text{VOC/HAP Content})$$
$$\text{Yearly VOC/HAP Emissions} = \sum_{i=M-11}^M \text{Monthly VOC/HAP emissions}$$

n = Number of different VOC/HAP emitting products
M = Most recent complete month

VOC and HAP content records and calculations shall be tracked and calculated on a 12-month rolling total basis. The records and calculations shall be kept for six years and shall be made available upon request from the department.

D. Clarification in Condition 19(B)

Condition 19(B) is the following:

B. In addition to the annual VOC and triennial HAP emissions reporting required under 06-096 CMR 137, C&L shall submit to the Department an annual report of VOC and HAP actual emissions. This report shall be submitted by May 15 for the previous calendar year and shall include the breakdown of specific pollutants emitted for each category. The information submitted shall be based on facility records including the following: identities and quantities of specific coatings, strippers, primers, and solvents used; inventory records; SDS; and other information, as necessary. The source of the reported values, including sample calculations, shall be identified for each VOC and HAP included in the report. [06-096 CMR 115, BACT]

This condition, as written, requires C&L Aviation to report all HAP emissions on a yearly basis. The condition will be amended to require C&L Aviation to report HAP emissions from the coating operations, including paint stripping, priming, topcoats, gun cleaning and solvents, and wash solvents, on a yearly basis, allowing for the inclusion of HAP emissions reporting from the fuel burning equipment only every three years as is

required by 06-096 CMR 137. The following condition will replace the original condition, with the change in bold:

B. *In addition to the annual VOC and triennial HAP emissions reporting required under 06-096 CMR 137, C&L shall submit to the Department an annual report of VOC and HAP actual emissions from coating operations, including paint stripping, priming, topcoats, gun cleaning and solvents, and wash solvents. This report shall be submitted by May 15 for the previous calendar year and shall include the breakdown of specific pollutants emitted for each category. The information submitted shall be based on facility records including the following: identities and quantities of specific coatings, strippers, primers, and solvents used; inventory records; SDS; and other information, as necessary. The source of the reported values, including sample calculations, shall be identified for each VOC and HAP included in the report. [06-096 CMR 115, BACT]*

E. Annual Emissions

C&L Aviation shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on the stripping and coating material limits identified in section II (C)(4) of license A-1093-71-A-N (SM) and 8,760 hours/year of operation of the Make-up Air Units.

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC	Total HAP
Coating Operations	--	--	--	--	--	47.5	2.4
Make-up Air Units	1.9	1.9	0.02	3.7	3.1	0.4	--
Total TPY	1.9	1.9	0.1	3.7	3.1	47.9	2.4

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 Amendment A-1093-71-B-M subject to the conditions found in Air Emission License A-1093-71-A-N (SM), and the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License Amendment shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following condition replaces Specific Condition (16) in Air Emission License A-1093-71-A-N:

(16) Coating Applications

- A. C&L shall utilize electrostatic, high volume, low pressure (HVLP) paint gun, and/or airless pump spray technology to apply strippers, primers, and topcoats in the aircraft coating process. [06-096 CMR 115, BACT]
- B. All material containing VOC shall be stored in closed containers except during actual use. [06-096 CMR 115, BACT]
- C. All cleaning of HVLP paint spray guns shall be done in a closed lid gun wash cabinet so that an atomized mist or spray of gun cleaning solvent and paint residue is not created. Cleaning of electrostatic paint equipment shall be done either in accordance with the HVLP guns cleaning process or manually without any atomization spray. [06-096 CMR 115, BACT]
- D. Exhausts from all spray booths (and the entire hangar, when it is used as a large spray booth), shall be equipped with dry filters to control particulate emissions from overspray generated during the spray application of coatings. The filters shall be demonstrated to achieve at least 98% capture efficiency, based on filter efficiency data from the filter manufacturer, as specified and required in 40 CFR Part 63, Subpart HHHHHH §63.11173(e). [06-096 CMR 115, BACT]
- E. No materials containing methylene chloride (e.g. paint stripper) shall be used at the C&L facility. [06-096 CMR 115, BACT]
- F. C&L shall maintain the following records:
 - 1. SDS for each stripper, primer, coating, or cleaning solvent used;
 - 2. The percent by weight of VOC and the percent by weight of HAP in each substance;

G. C&L shall calculate VOC and HAP emissions using the following method to demonstrate compliance with the established limits:

$$\text{Monthly VOC/HAP Emissions} = \sum_{i=1}^n (\text{Product Usage} \times \text{VOC/HAP Content})$$

$$\text{Yearly VOC/HAP Emissions} = \sum_{i=M-11}^M \text{Monthly VOC/HAP emissions}$$

n = Number of different VOC/HAP emitting products
M = Most recent complete month

Calculations of emissions shall be based on SDS information, the daily usage log, purchase records, and the assumption that 100% of VOCs and volatile HAPs contained in the applied substances are released to the atmosphere. Non-volatile HAP emissions can be estimated by using the HVLP guns' PM control efficiencies and the PM control efficiency of the building's filter.
[06-096 CMR 115, BACT]

H. VOC and HAP content records and calculations shall be tracked and calculated on a monthly and 12-month rolling total basis. The records and calculations shall be kept for six years and shall be made available upon request from the department.

I. C&L shall operate the coating processes as to limit total facility VOC and HAP emissions to the following on a 12-month rolling total basis:

- 47.9 tons per year of VOCs
- 2.4 tons per year of total HAPs

[06-096 CMR 115, BACT]

J. C&L shall comply with the applicable requirements of 40 CFR Part 63, Subpart HHHHHH, including but not limited to the following: training and certification requirements; spray booth requirements; enclosure specifications; coating application methods requirements; spray gun cleaning specifications; and notifications, reporting, and recordkeeping requirements. [40 CFR Part 63, Subpart HHHHHH]

K. C&L shall submit current Safety Data Sheets to the Department for the custom blended solvent(s) used for process washing and spray gun cleaning, within 30 days after C&L receives the first batch of the custom solvent created by the solvent vendor. [06-096 CMR 115, BACT]

The following condition replaces Specific Condition (19) in Air Emission License A-1093-71-A-N:

(19) Annual Emission Statement

A. In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of either of the following:

1. A computer program and accompanying instructions supplied by the Department; or
2. A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

B. In addition to the annual VOC and triennial HAP emissions reporting required under 06-096 CMR 137, C&L shall submit to the Department an annual report of VOC and HAP actual emissions from coating operations, including paint stripping, priming, topcoats, gun cleaning and solvents, and wash solvents. This report shall be submitted by May 15 for the previous calendar year and shall include the breakdown of specific pollutants emitted for each category. The information submitted shall be based on facility records including the following: identities and quantities of specific coatings, strippers, primers, and solvents used; inventory records; SDS; and other information, as necessary. The source of the reported values, including sample calculations, shall be identified for each VOC and HAP included in the report. [06-096 CMR 115, BACT]

The following condition is in addition to the conditions listed in Air Emission License A-1093-71-A-N.

(21) Make-up Air Units (MAU-1 and MAU-2)

A. Emissions from MAU-1 and MAU-2 shall not exceed limits presented in the following tables. [06-096 CMR 115, BACT]

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
MAU-1	PM	0.05
MAU-2	PM	0.05

C&L Aerospace Holdings, LLC
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<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>PM_{2.5} (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
MAU-1 natural gas	0.22	0.22	0.22	0.01	0.42	0.36	0.02
MAU-2 natural gas	0.22	0.22	0.22	0.01	0.42	0.36	0.02

B. Visible emissions from MAU-1 and MAU-2 shall not exceed 10% opacity on a six minute block average basis. This limit pertains to all ventilation directed outside. [06-096 CMR 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 26 DAY OF August, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Paul Mercer for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-1093-A-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 02/26/2016

Date of application acceptance: 03/01/2016

Date filed with the Board of Environmental Protection:

This Order prepared by Colby Fortier-Brown, Bureau of Air Quality.

