

Modern Woodcrafts, LLC)	Departmental
Androscoggin County)	Findings of Fact and Order
Lewiston, Maine)	Air Emission License
A-141-71-K-R/A (SM))	

After review of the air emissions license application, staff investigation reports and other documents in the applicant’s file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction:

Modern Woodcrafts, LLC (MW) of Lewiston, Maine, has applied to renew their Air Emission License permitting the operation of emission sources associated with their woodworking and finishing facility.

MW has requested an amendment to their License to reflect the following:

1. The installation of two paint booths and a Make-up Air Heater.
2. An increase in the fuel limit in Boiler #1 to 100,000 gallons of #5 fuel oil on a 12 month rolling total.
3. A decrease in the process VOC emission limit from 30 tons/year to 24.4 tons/year on a 12 month rolling total.

B. Emission Equipment:

MW is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % Sulfur</u>	<u>Post Combustion Ctrl Eqmmt</u>	<u>Stack #</u>
Boiler #1	10.5	70 gal/hr	#5, 2.0%	none	1
¹ Make-up Air Heater	3.9	3824 scf/hr	Nat. Gas	none	67
² Drying Oven	0.5	-	-	-	66

1-Denotes new equipment.

2-The Drying Oven is considered insignificant and is listed for inventory purposes only.

Modern Woodcrafts, LLC)
 Androscoggin County)
 Lewiston, Maine)
 A-141-71-K-R/A (SM) 2

**Departmental
 Findings of Fact and Order
 Air Emission License**

Process Equipment

Equipment	Prod. Rate	Pollutant Emitted	Control Device	Stack #
Adhesive Booth 60	50.0 lb/hr	VOC	None	vent 60
Paint Spray Booth 61	86.3 lb/hr	PM, VOC	paint arrestors	vent 61
Paint Spray Booth 62	86.3 lb/hr	PM, VOC	paint arrestors	vent 61
Paint Spray Booth 63	86.3 lb/hr	PM, VOC	paint arrestors	vent 63
Paint Spray Booth 64	86.3 lb/hr	PM, VOC	paint arrestors	vent 63
³ Paint Spray Booth 66	86.3 lb/hr	PM, VOC	paint arrestors	vent 66
³ Paint Spray Booth 67	86.3 lb/hr	PM, VOC	paint arrestors	vent 67
Woodworking eqpmnt.	varies	PM	Cyclone	

3-Denotes new equipment

C. Application Classification:

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as given in Maine’s Air Regulations. This application is determined to be a minor modification and renewal of a synthetic minor source, 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 (last amended December 24, 2005) of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

Process Description

MW manufactures high quality display cases and wood fixtures for various department stores across the country. Their products are used as interior design accents in the store’s decoration scheme. MW receives their raw materials: rough sawn wood (mostly poplar, with some red oak, cherry and mahogany), veneer, and particleboard. The wood is sawed, planed and drilled based on the product that is

being made. All of the wood-working equipment at MW vents to a cyclone. The captured sawdust is removed from the site.

After the wood is cut and processed, it is edge banded and laminated. MW operates one spray booth for laminating the wood, three additional spray booths for staining, toning and painting, and a cement adhesive spray booth. Each of the surface coating booths is equipped with paint arrestors for particulate control. The arrestors consist of several layers of woven paper mats. The arrestors have pressure drop monitors on the vacuum systems to monitor when the filters should be changed.

The finished products are then sent to assembling where fixtures are attached. The fixtures range from brass door handles to mirrors and drawer handles. The products are assembled and sent to the specific store for which they were constructed.

B. Boiler #1:

Boiler #1 was manufactured in 1987 with a maximum design capacity of 10.5 MMBtu/hr. It is, therefore, not subject to EPA's New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after July 9, 1989.

BPT for Boiler #1 is the following:

1. *Low Sulfur Fuel*, 06-096 CMR 106 (last amended June 9, 1999) regulates fuel sulfur content for Boiler #1.
2. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
3. The NOx emission limit is based on data for boilers of similar age and operation.
4. CO and VOC emission limits are based on AP-42 data dated 9/98 for oil fired boilers.
5. Visible emissions from stack #1 shall not exceed 30% opacity on a 6-minute block average, except for no more than two (2), six (6) minute block averages in a 3-hour period.

C. Make-up Air Heater:

The Make-up Air Heater is rated at 3.9 MMBtu/hr and fires Natural Gas. Exhaust from the Make-up Air Heater is released through vent 67 along with Paint Spray Booth 67.

BACT for the Make-up Air Heater is the following:

1. The Make-up Air Heater shall fire only Natural Gas.

2. 06-096 CMR 106 regulates fuel sulfur content. However, the use of natural gas is more stringent and shall be considered BACT.
3. 06-096 CMR 103 regulates PM emission limits. However, the use of natural gas is more stringent and shall be considered BACT. The PM₁₀ limits are derived from the PM limits.
4. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 7/98 for the combustion of natural gas.
5. The Make-up Air Heater shares a stack with Paint Spray Booth 67. Therefore, visible emissions from vent 67 shall not exceed 5% opacity on a six (6) minute block average.

D. Process Equipment PM Emissions:

MW operates six paint spray booths, one adhesive spray booth, and various woodworking equipment, including saws, planers and drills. All of the woodworking equipment vents to a cyclone. All of the paint booths are equipped with paint arrestors for particulate control. The adhesive spray booth is uncontrolled.

BPT (Woodworking, Adhesive Spray Booth, Paint Spray Booths 61, 62, 63, and 64), and BACT (Paint Spray Booths 66, and 67) for control of PM from the Process Equipment is the following:

1. MW shall operate and maintain the paint arrestors on the paint spray booths such that visible emissions from the spray booth vents do not exceed 5% opacity on a 6-minute block average basis.
2. MW shall operate and maintain the woodworking equipment cyclone such that visible emissions from the cyclone's vents do not exceed 5% opacity on a 6-minute block average basis.
3. Visible emissions from all uncontrolled building vents shall not exceed 10% opacity on a 6-minute block average.
4. MW shall keep a log detailing all routine and non-routine maintenance on the paint arrestors and the woodworking equipment cyclone.

E. Process Equipment VOC and HAP Emissions:

The six paint spray booths and one adhesive spray booth are sources of volatile organic chemicals (VOC). VOC emissions are minimized through the use of HVLP spray guns or guns with no air assist operated with a high pressure pump. VOC emissions from the booths are limited to 24.4 tons/year, based on a 12-month rolling total.

Many of the coating materials also contain hazardous air pollutants (HAPs). In conjunction with the 24.4 tons/year VOC emission limit, MW shall be limited to 9.9 tons/year of any one HAP or 24.9 tons/year total of all HAPs, based on a 12-month rolling total.

Surface Coating Facilities, 06-096 CMR 129 regulates the Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) from selected surface coating operations. MW meets the category definition of Wood Furniture and Manufacturing Operations. 06-096 CMR 129 (10)(c) references the standard to 40 CFR, Part 63, Subpart JJ. As Subpart JJ is only applicable to major sources, MW is not subject to 06-096 CMR 129.

MW shall keep records of the amount of VOC and HAP emitted on monthly and 12-month rolling totals.

BPT (Adhesive Spray Booth, Paint Spray Booths 61, 62, 63, and 64), and BACT (Paint Spray Booths 66, and 67) for control of VOC and HAP from the Process Equipment is the following:

1. MW shall not exceed a VOC process emission limit of 24.4 tons/year, based on a 12 month rolling total.
2. MW shall not exceed a HAP emission limit of 9.9 tons/year of any single HAP or 24.9 tons/year total HAPs, based on a 12 month rolling total.
3. The use of high volume-low pressure (HVLP) spray guns or guns with no air assist for coating applications.
4. Visible emissions from the Paint Spray Booth vents (vents 61, 62, 63, 64, 66, and 67) shall not exceed an opacity of 5% per vent on a 6-minute block average basis.
5. Visible emissions from the Adhesive Spray Booth vent (vent 60), and any other uncontrolled building vents shall not exceed 10% opacity on a 6-minute block average basis.

F. Fugitive Emissions

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

Modern Woodcrafts, LLC)
 Androscoggin County)
 Lewiston, Maine)
 A-141-71-K-R/A (SM) 6

**Departmental
 Findings of Fact and Order
 Air Emission License**

G. Annual Emission Restrictions:

1. Boiler #1 shall not exceed 100,000 gallons of #5 fuel oil with a sulfur content not to exceed 2.0%.
2. Emissions from the Make-up Air Heater are based on continuous operation.
3. VOC process emissions shall not exceed 24.4 tons/year on a 12 month rolling total.
4. HAP emissions shall not exceed 9.9 tons/year for any single HAP or 24.9 tons/year total HAP, on a 12 month rolling total.
5. MW shall not exceed the following limits on a 12-month rolling total basis:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC	Single HAP	Total HAP
Boiler #1	0.90	0.90	15.76	2.75	0.25	0.06		-
Make-up Air Heater	0.85	0.85	0.01	1.68	1.41	0.09		-
Process Sources	-	-	-	-	-	24.4	9.9	24.9
Total TPY	1.75	1.75	15.77	4.43	1.66	24.55	9.9	24.9

III. AMBIENT AIR QUALITY ANALYSIS

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

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-141-71-K-R/A subject to the following conditions:

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

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee’s premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records

- for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to

the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

- C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

- (16) Boiler #1
 - A. Boiler #1 shall be limited to 100,000 gallons of #5 fuel oil, on a 12-month rolling total, with a sulfur content not to exceed 2.0%. Compliance shall be demonstrated through fuel use records maintained on monthly and 12 month rolling totals and fuel receipts showing the sulfur content of the fuel. [06-096 CMR 115, BPT]

- B. Emissions from boiler #1 shall not exceed the following: [06-096 CMR 115, 06-096 CMR 103, BPT]

Boiler #1 Emission Limits

	lb/MMBtu	lb/hr
PM	0.12	1.26
PM ₁₀	-	1.26
SO ₂	-	22.06
NO _x	-	3.85
CO	-	0.35
VOC	-	0.08

- C. Visible emissions from boiler #1 (stack 1) shall not exceed 30% opacity on a 6-minute block average, except for no more than 2, six-minute block averages in a 3-hour period. [06-096 CMR 101]

(17) Make-up Air Heater

- A. The Make-up Air Heater shall fire only natural gas. Records from the supplier shall be kept for compliance purposes. [06-096 CMR 115, BACT]
- B. Emissions from the Make-up Air Heater shall be limited to the following: [06-096 CMR 115, 06-096 CMR 103, BACT]

Make-up Air Heater Emission Limits

	lb/MMBtu	lb/hr
PM	0.05	0.20
PM ₁₀	-	0.20
SO ₂	-	Neg.
NO _x	-	0.38
CO	-	0.32
VOC	-	0.02

- C. Make-up Air Heater shares a stack with Paint Spray Booth 67 (vent 67). Therefore, the visible emissions from vent 67 shall not exceed 5% opacity on a 6 minute block average. [06-096 CMR 101, BACT]

(18) Process Equipment PM Emissions

[06-096 CMR 115, 06-096 CMR 101, BPT, BACT]

- A. MW shall operate and maintain the paint arrestors on the paint spray booths such that visible emissions from the spray booth vents do not exceed 5% opacity on a 6-minute block average basis.

- B. MW shall operate and maintain the woodworking equipment cyclone such that visible emissions from the cyclone's vents do not exceed 5% opacity on a 6-minute block average basis.
 - C. Visible emissions from all uncontrolled building vents shall not exceed 10% opacity on a 6-minute block average.
 - D. MW shall keep a log detailing all routine and non-routine maintenance on the paint arrestors and the woodworking equipment cyclone.
- (19) Process Equipment VOC and HAP Emissions
- A. Process VOC emissions from MW shall not exceed 24.4 tons/year, based on a 12-month rolling total. Compliance shall be demonstrated through records detailing the amount of VOC containing material used, the percent VOC of the material (from MSDS sheets) and the amount of VOC emitted, based on mass balance calculations, on a monthly and 12-month rolling basis. [06-096 CMR 115, BPT, BACT]
 - B. Total HAP emissions from MW shall not exceed 9.9 tons/year for any single HAP or 24.9 ton/year total HAP, based on a 12-month rolling total. Compliance shall be demonstrated through records detailing the amount of HAP material used, the percent HAP of the material (from MSDS sheets), and the amount of HAP emitted, based on mass balance calculations, on a monthly and 12-month rolling basis. [06-096 CMR 115, BPT, BACT]
 - C. MW shall operate HVLP guns or guns which are not air pressure assisted in the paint spray booths. Spray booth guns may be operated with a high pressure pump. [06-096 CMR 115, BPT, BACT]
 - D. Visible emissions from each of the Paint Spray Booth vents shall not exceed 5% opacity per vent on a 6-minute block average basis. [06-096 CMR 101, BPT, BACT]
 - E. Visible emissions from the Adhesive Spray Booth or any other uncontrolled building vents shall each not exceed 10% opacity on a 6-minute block average basis.
- (20) Fugitive Emissions
- Visible emissions from any fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

Modern Woodcrafts, LLC)
Androscoggin County)
Lewiston, Maine)
A-141-71-K-R/A (SM) 12

**Departmental
Findings of Fact and Order
Air Emission License**

(21) Air Toxics Emission Statement

If MW exceeds the thresholds for HAPs listed in Appendix A of 06-096 CMR 137 in an inventory year, in accordance with 06-096 CMR 137 the licensee shall report, no later than July 1 every three years (2005, 2008, 2011, etc.) or as otherwise stated in 06-096 CMR 137, the information necessary to accurately update the State's toxic air pollutants emission inventory in a format prescribed by the Department containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: HAP Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437 [06-096 CMR 137]

- (22) MW shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 8/29/2007

Date of application acceptance: 9/24/2007

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.