

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Ello Furniture Manufacturing Co.  
Attn: Alan Molton  
1350 Preston Street  
Rockford, Illinois 61102

Application No.: 05120065

I.D. No.: 201030AZD

Applicant's Designation: furniture

Date Received: December, 27 2005

Subject: Paint Spray Booths

Date Issued:

Expiration Date:

Location: 1350 Preston Street, Rockford, Winnebago County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of twelve paint spray booths controlled by dry filters and two (2) 12 mmBtu/hour natural gas-fired boilers pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
  - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for volatile organic material (VOM), 10 tons/year for a single hazardous air pollutant (HAPs), and 25 tons/year for any combination of such HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
  - ii. To establish federally enforceable production and operating limitations so that the source is classified as an area source under the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Furniture Manufacturing Operations, 40 CFR 63 Subpart JJ.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. This source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Furniture Manufacturing Operations, 40 CFR 63, Subparts A and JJ. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 63.800(b), a source that complies with the limits and criteria specified in 40 CFR 63.800(b)(1), (b)(2), or (b)(3) is an area source for the purposes of 40 CFR 63 Subpart JJ and is not subject to any other provision of this rule, provided that: In the case of 40 CFR 63.800(b)(1) and (b)(2), finishing materials, adhesives, cleaning solvents and washoff solvents used for wood furniture or wood furniture component manufacturing operations account for at least 90 percent of annual HAP emissions at the plant site, and if the plant site has HAP emissions that do not originate from the listed materials, the owner or operator shall keep any records necessary to demonstrate that the 90 percent criterion is being met. A source that initially relies on the limits and criteria specified in 40 CFR 63.800(b)(1), (b)(2), and (b)(3) to become an area source, but subsequently exceeds the relevant limit (without first obtaining and complying with other limits that keep its potential to emit hazardous air pollutants below major source levels), becomes a major source and must comply thereafter with all applicable provisions of 40 CFR 63 Subpart JJ starting on the applicable compliance date in 40 CFR 63.800. Nothing in 40 CFR 63.800(b) is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.
- c. Pursuant to 40 CFR 63.800(b)(3), the source emits no more than 4.5 Mg (5 tons) of any one HAP per rolling 12-month period and no more than 11.4 Mg (12.5 tons) of any combination of HAP per rolling 12-month period, and at least 90 percent of the plant wide emissions per rolling 12-month period are associated with the manufacture of wood furniture or wood furniture components.
- 3a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 4. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.
- 5a. Pursuant to 35 Ill. Adm. Code 215.204(1), no owner or operator of a wood furniture coating line shall cause or allow the emission of volatile organic material to exceed the following limitations on

coating materials, excluding water and any compounds which are specifically exempted from the definition of volatile organic material pursuant to 35 Ill. Adm. Code Part 215, delivered to the coating applicator:

	<u>kg/l</u>	<u>lb/gal</u>
i. Clear Topcoat	0.67	5.6
ii. Opaque Stain	0.56	4.7
iii. Pigmented Coat	0.60	5.0
iv. Repair Coat	0.67	5.6
v. Sealer	0.67	5.6
vi. Semi-Transparent Stain	0.79	6.6
vii. Wash Coat	0.73	6.1

The repair coat has overall transfer efficiency of 30 percent; all others have an overall transfer efficiency of 65 percent.

- b. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart K shall apply only to photochemically reactive material.
- 6. Pursuant to 35 Ill. Adm. Code 215.209, no coating line subject to the limitations of 35 Ill. Adm. Code 215.204 is required to meet 35 Ill. Adm. Code 215.301 or 218.302 after the date by which the coating line is required to meet 35 Ill. Adm. Code 215.204.
- 7a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
- 8a. Emissions of and operation of the paint booths and clean-up operations shall not exceed the following limits:

i. VOM Emissions:

VOM Usage		VOM Emissions	
<u>Tons/Month</u>	<u>Tons/Year</u>	<u>Tons/Month</u>	<u>Tons/Year</u>
2.55	24.0	2.55	24.0

These limits are based on the maximum material usage and the maximum VOM content of these materials.

ii. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the paint booths and clean-up operations shall not exceed 0.5 tons/month and 5.0 tons/year of any single HAP and 1.20 tons/month and 12.0 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA and establishes this source as an area source under the NESHAP for Wood Furniture Manufacturing Operations, 40 CFR 63 Subpart JJ.

iii. Compliance with this limits in Conditions 8(a) (i) and (ii) shall be determined from the use of the following equation:

$$E = \sum (R_i \times d_i \times C_i)$$

Where:

E = VOM or HAP emissions (lbs);

R<sub>i</sub> = Raw material usage including thinners and clean-up solvents (gallons);

d<sub>i</sub> = Density of material (lbs/gallon); and

C<sub>i</sub> = VOM or HAP content of the raw materials (% by weight).

b. This permit is issued based on negligible emissions of particulate matter from each paint spray booth with dry filter. For this purpose, emissions from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

c. Operation and emissions of the two (2) boilers (combined) shall not exceed the following limits:

<u>Pollutant</u>	Emission Factor	Emissions	
	<u>(Lbs/mmscf)</u>	<u>(Lbs/Hour)</u>	<u>(Tons/Year)</u>
Carbon Monoxide (CO)	84.0	2.02	8.83
Nitrogen Oxides (NO <sub>x</sub> )	100.0	2.40	10.51
Particulate Matter (PM)	7.6	0.18	0.80
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.01	0.06
Volatile Organic Material (VOM)	5.5	0.13	0.58

These limits are based on the maximum fire rate for each boiler (12.0 mmBtu/hour), standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998), and 8,760 hours/year of operation.

- d. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 9a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
  - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Conditions 10 and 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 10a. Pursuant to 35 Ill. Adm. Code 212.107, for both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR Part 60, Appendix A, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. 35 Ill. Adm. Code 212 Subpart A shall not apply to 35 Ill. Adm. Code 212.301.

- b. Pursuant to 35 Ill. Adm. Code 212.109, except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.
- c. Pursuant to 35 Ill. Adm. Code 212.110(a), measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 5, 5A, 5D, or 5E.
- d. Pursuant to 35 Ill. Adm. Code 212.110(b), the volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4.
- e. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 11a. Pursuant to 35 Ill. Adm. Code 215.208(a), the VOM content of coatings shall be determined by Method 24, 40 CFR Part 60, Appendix A, except for glues and adhesive coatings, two component reactive coatings forming volatile reaction products, coatings requiring energy other than heat to initiate curing, and coatings requiring high temperature catalysis for curing, providing the person proposing testing of the material submits to the Illinois EPA proof that the Method 24 results would not be representative and proof that a proposed alternative test method gives representative, accurate test results. For printing inks, the volatile organic material content shall be determined by Method 24A, 40 CFR Part 60, Appendix A. Any alternate test method must be approved by the Illinois EPA which shall consider data comparing the performance of the proposed alternative to the performance of the approved test method(s). If the Illinois EPA determines that such data demonstrates that the proposed alternative will achieve results equivalent to the approved test method(s), the Illinois EPA shall approve the proposed alternative.

- b. Pursuant to 35 Ill. Adm. Code 215.208(b), transfer efficiency shall be determined by a method, procedure or standard approved by the USEPA, under the applicable new source performance standard or until such time as USEPA has approved and published such a method, procedure or standard, by any appropriate method, procedure or standard approved by the Illinois EPA.
- 12. Pursuant to 40 CFR 63.800(b)(3), the owner or operator shall maintain records that demonstrate that annual emissions do not exceed these levels, including monthly usage records for all finishing, gluing, cleaning, and washoff materials; certified product data sheets for these materials; and any other records necessary to document emissions from source categories other than wood furniture and upon request submit such records to the Illinois EPA or USEPA. These records shall be maintained for five years.
- 13. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 14a. The Permittee shall keep records of the following items so as to demonstrate compliance with the conditions of this permit:
  - i. Records addressing use of good operating practices for the paint spray booth dry filters:
    - A. Records for periodic inspection of the paint spray booth dry filters with date, individual performing the inspection, and nature of inspection; and
    - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
  - ii. The amount of paint and cleaning solvent used (gallons/month and gallons/year);
  - iii. The VOM and HAP contents of each material used (% by weight);
  - iv. Density of materials (lbs/gallon); and
  - v. Monthly and annual CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOM and HAP emissions from the source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of

being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

15. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
16. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
17. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control- Regional Office  
5415 North University  
Peoria, Illinois 61614

If you have any questions on this, please call David Hulskotter at 217/782-2113.

Edwin C. Bakowski, P.E.  
Acting Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

ECB:DWH:psj

cc: Illinois EPA, FOS Region 2  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emission from the paint booths used for coating plastic parts operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario, which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons/year of VOM, 10 tons/year of a single HAP, and 25 tons/year of any combination of such HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)						<u>Total HAPs</u>
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>	<u>Single HAP</u>	
Twelve Paint Spray Booths			5.28		24.00	5.0	12.5
Two Natural Gas- Fired Boilers	<u>8.83</u>	<u>10.51</u>	<u>0.80</u>	<u>0.06</u>	<u>0.58</u>	<u>----</u>	<u>----</u>
Totals	<u>8.83</u>	<u>10.51</u>	<u>6.08</u>	<u>0.06</u>	<u>24.58</u>	<u>5.0</u>	<u>12.5</u>

DWH:psj