

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Hill-Rom Company, Inc.
1125 East Pearl Street
Batesville, Indiana 47006**

is hereby authorized to construct

a modification to the existing hospital furniture and support furniture manufacturing operation, consisting of the equipment listed in Pages 2 and 3 of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-137-9710-00002	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

- (a) one (1) wood chair surface coating line, identified as the 142 Chair Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-1;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-2; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-3;

- (b) one (1) wood chair surface coating line, identified as the 370 Chair Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-4;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-5; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-6;

- (c) one (1) wood chair surface coating line, identified as the 125 Chair Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-7;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-8; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-9;

- (d) one (1) wood cabinet surface coating line, identified as the Cabinet Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-10;

- (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-11; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-12;
- (e) one (1) router, processing a maximum of 4 units per hour on the Cabinet Line, with a dust collector for particulate matter control, exhausting through one (1) stack, identified as S/V-2; and
- (f) one (1) 4" stroke sander, processing a maximum of 1 unit per hour, with a dust collector for particulate matter control, exhausting through one (1) stack, identified as S/V-2.

Note: The twelve (12) new surface coating booths are replacing the four (4) existing surface coating booths in the Wood Furniture Surface Coating Department, identified as H-23.

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 26 IAC 2-7-19 (Fees)
- (e) The Permittee has submitted their Part 70 permit application (T-137-6026-00002) on June 3, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

NESHAP Reporting Requirement

- 7. That pursuant to the National Emission Standard for Hazardous Air Pollutants (NESHAP), Part 63.800 - 63.808, Subpart JJ, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - (a) Commencement of construction date (no later than 30 days after such date);
 - (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - (c) Actual start-up date (within 15 days after such date); and
 - (d) Date of performance testing (at least 60 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 63 are also federally enforceable.

- 8. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

- 1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this hospital furniture and support furniture manufacturing operation is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
 - (a) Violation of any conditions of this permit.
 - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
 - (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
 - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
 - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM or other public official having jurisdiction.

Malfunction Condition

7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
 - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
 - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
 - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
 - (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Fugitive Dust Emissions

10. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

11. That pursuant to 326 IAC 6-3 (Process Operations):

(a) The following shall apply to the twelve (12) wood furniture surface coating booths:

(1) The dry filters for particulate matter overspray control shall be in operation at all times when the twelve (12) wood furniture surface coating booths are in operation.

(2) The twelve (12) wood furniture surface coating booths shall comply with 326 IAC 6-3-2(c) using the following equation:

$$E = 4.10P^{0.67} \quad \text{where: } E = \text{rate of emission in pounds per hour,} \\ P = \text{process weight in tons per hour.}$$

(3) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray while one or more of the booths are in operation.

(4) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground.

(5) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

(b) The particulate matter emissions from the woodworking operation, including the router and sander, shall be limited to 0.86 pounds per hour based on a process weight rate of 0.098 tons per hour and the following equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Volatile Organic Compound (VOC) Limitations

12. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture and/or wood components shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

Wood Furniture NESHAP [40CFR Part 63, Subpart JJ]

13. (a) The wood furniture coating operation is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20-14, (40 CFR 63, Subpart JJ), with a compliance date of immediately upon startup:
- (b) Pursuant to 40 CFR 63, Subpart JJ, the wood furniture coating operations shall comply with the following conditions:
- (1) Limit the Volatile Hazardous Air Pollutants (VHAP) emissions from finishing operations as follows:
 - (A) Achieve a weighted average volatile hazardous air pollutant (VHAP) content across all coatings of eight-tenths (0.8) pound VHAP per pound solids.
 - (B) Use compliant finishing materials in which all stains, washcoats, sealers, topcoats, basecoats and enamels have a maximum VHAP content of eight-tenths (0.8) pound VHAP per pound solid, as applied. Thinners used for on-site formulation of washcoats, basecoats, and enamels have a three percent (3.0%) maximum VHAP content by weight. Solvent and thinner mixtures used for other purposes have a ten percent (10%) maximum VHAP content by weight; or
 - (C) Use a control device to limit emissions to eight-tenths (0.8) pound VHAP per pound solids; or
 - (D) Use a combination of (A), (B), and (C).
 - (2) Limit VHAP emissions from contact adhesives as follows:
 - (A) For foam adhesives used in products that meet the upholstered seating flammability requirements, the VHAP content shall not exceed two-tenths (0.2) pound VHAP per pound solids.
 - (B) For all other contact adhesives (except aerosols and contact adhesives applied to nonporous substrates) the VHAP content shall not exceed two-tenths (0.2) pound VHAP per pound solids.
 - (C) Use a control device to limit emissions to two-tenths (0.2) pound VHAP per pound solids.
 - (3) The strippable spray booth material shall have a maximum VOC content of eight-tenths pounds VOC per pounds solids.

Work Practice Standards [40 CFR 63.803]

14. The owner or operator of an affected source subject to this subpart shall prepare and maintain a written work practice implementation plan within sixty (60) calendar days after the compliance date. The work practice implementation plan must define environmentally desirable work practices for each wood furniture manufacturing operation and at a minimum address each of the following work practice standards as defined under 40 CFR 63.803.
- (a) Operator training course.
 - (b) Leak inspection and maintenance plan.
 - (c) Cleaning and washoff solvent accounting system.
 - (d) Chemical composition of cleaning and washoff solvents.
 - (e) Spray booth cleaning.
 - (f) Storage requirements.
 - (g) Conventional air spray guns shall only be used under the circumstances defined under 40 CFR 63.803(h).
 - (h) Line cleaning.
 - (i) Gun cleaning.
 - (j) Washoff operations.
 - (k) Formulation assessment plan for finishing operations.

Record Keeping Requirements

15. (a) To document compliance with Condition 13, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be complete and sufficient to establish compliance with the VHAP usage limits established in Condition 13.
- (1) Certified product Data Sheet for each finishing material, thinner, contact adhesive and strippable booth coating.
 - (2) The HAP content in pounds of VHAP per pounds of solids, as applied, for all finishing materials and contact adhesives used.
 - (3) The VOC content in pounds of VOC per pounds of solids, as applied, for each strippable coating used.
 - (4) The VHAP content in weight percent of each thinner used.
 - (5) Copies of the averaging calculations for each month as well as the data on the quantity of coating and thinners used to calculate the average.
- (b) To document compliance with Condition 14, the Permittee shall maintain records demonstrating actions have been taken to fulfill the Work Practice Implementation Plan.

Reporting Requirements

16. (a) An Initial Compliance Report to document compliance with Condition 13, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within sixty (60) calendar days following the date of startup. The initial compliance report must include data from the entire month that the compliance date falls.

- (b) A semi-annual Continuous Compliance Report to document compliance with Condition 13 shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within thirty (30) days after the end of the six (6) months being reported.
The six (6) month period shall begin on the first day of the month after which the operation commences.

Open Burning

17. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

18. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within 180 calendar days from the issuance date of this permit.

- (c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

- (f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

19. Any change or modification which may increase potential emissions to 250 tons per twelve (12) consecutive month period, from the equipment covered in this permit, must be approved by the Office of Air Management (OAM) before such change may occur.

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - (317) 233-5967**

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON THE NEXT PAGE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Hill-Rom Company, Inc. PHONE NO. (812) 934-7000

LOCATION: (CITY AND COUNTY) Batesville, Ripley County

PERMIT NO. CP-137-9710 AFS PLANT ID: 137-00002 AFS POINT ID: _____ INSP: Joe Fovst
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL * SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

REV 3/96

FAX NUMBER - (317) 233-5967

*SEE NEXT PAGE

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1

Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39

“Malfunction” definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Hill-Rom Company, Inc.
Source Location: 1125 East Pearl Street, Batesville, Indiana 47006
County: Ripley
Construction Permit No.: CP-137-9710-00002
SIC Code: 2599
Permit Reviewer: Trish Earls/EVP

The Office of Air Management (OAM) has reviewed an application from Hill-Rom Company, Inc. relating to the construction and operation of a modification to the existing hospital furniture and support furniture manufacturing operation, consisting of the following equipment:

- (a) one (1) wood chair surface coating line, identified as the 142 Chair Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-1;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-2; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-3;
- (b) one (1) wood chair surface coating line, identified as the 370 Chair Line, consisting of the following:
 - (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-4;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-5; and

- (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-6;
- (c) one (1) wood chair surface coating line, identified as the 125 Chair Line, consisting of the following:
- (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-7;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-8; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-9;
- (d) one (1) wood cabinet surface coating line, identified as the Cabinet Line, consisting of the following:
- (1) one (1) stain spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 7.5 units per hour, and exhausting through one (1) exhaust vent, identified as EF-10;
 - (2) one (1) sanding sealer spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-11; and
 - (3) one (1) topcoat spray booth, using an air assisted airless spray application system, with dry filters for particulate matter overspray control, coating a maximum of 16.25 units per hour, and exhausting through one (1) exhaust vent, identified as EF-12;
- (e) one (1) router, processing a maximum of 4 units per hour on the Cabinet Line, with a dust collector for particulate matter control, exhausting through one (1) stack, identified as S/V-2; and
- (f) one (1) 4" stroke sander, processing a maximum of 1 unit per hour, with a dust collector for particulate matter control, exhausting through one (1) stack, identified as S/V-2.

Note: The twelve (12) new surface coating booths are replacing the four (4) existing surface coating booths in the Wood Furniture Surface Coating Department, identified as H-23.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S/V 2, EF-1, EF-2, & EF-3	142 Chair Line	42.0	2.0	6,560	70
S/V 2, EF-4, EF-5, & EF-6	370 Chair Line	42.0	2.0	6,560	70
S/V 2, EF-7, EF-8, & EF-9	125 Chair Line	42.0	1.46	2,400	70
S/V 2, EF-10, EF-11, & EF-12	Cabinet Line	42.0	2.0	10,950	70

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on April 24, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (4 pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year for the twelve (12) new spray booths and the woodworking operation at maximum capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	--	20.3
Particulate Matter (PM10)	--	20.3
Sulfur Dioxide (SO ₂)	--	0.0
Volatile Organic Compounds (VOC)	--	142.7
Carbon Monoxide (CO)	--	0.0
Nitrogen Oxides (NO _x)	--	0.0
Single Hazardous Air Pollutant (HAP)	--	13.8
Combination of HAPs	--	32.9

- (a) Allowable emissions (as defined in the Indiana Rule) of VOC are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

- (b) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Ripley County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Ripley County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source Part 70 Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM	28.6
PM10	28.6
SO ₂	0.1
VOC	249.9
CO	3.2
NO _x	12.9

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the Part 70 application (T-137-6026-00002) submitted by the company on June 3, 1996, and public noticed on January 2, 1998.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	4.1	4.1	0.0	142.7	0.0	0.0
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-137-6026-00002) application on June 3, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12), 40 CFR Part 60, applicable to this facility.
- (b) This wood furniture coating operation is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20-14, (40 CFR 63, Subpart JJ), with a compliance date immediately upon startup.

Pursuant to 40 CFR 63, Subpart JJ, the wood furniture coating operations shall comply with the following conditions:

- (1) Limit the Volatile Hazardous Air Pollutants (VHAP) emissions from finishing operations as follows:
 - (A) Achieve a weighted average volatile hazardous air pollutant (VHAP) content across all coatings of eight-tenths (0.8) pound VHAP per pound solids.
 - (B) Use compliant finishing materials in which all stains, washcoats, sealers, topcoats, basecoats and enamels have a maximum VHAP content of eight-tenths (0.8) pound VHAP per pound solid, as applied. Thinners used for on-site formulation of washcoats, basecoats, and enamels have a three percent (3.0%) maximum VHAP content by weight. Solvent and thinner mixtures used for other purposes have a ten percent (10%) maximum VHAP content by weight; or

- (C) Use a control device to limit emissions to eight-tenths (0.8) pound VHAP per pound solids; or
 - (D) Use a combination of (A), (B), and (C).
- (2) Limit VHAP emissions from contact adhesives as follows:
- (A) For foam adhesives used in products that meet the upholstered seating flammability requirements, the VHAP content shall not exceed two-tenths (0.2) pound VHAP per pound solids.
 - (B) For all other contact adhesives (except aerosols and contact adhesives applied to nonporous substrates) the VHAP content shall not exceed two-tenths (0.2) pound VHAP per pound solids.
 - (C) Use a control device to limit emissions to two-tenths (0.2) pound VHAP per pound solids.
- (3) The strippable spray booth material shall have a maximum VOC content of eight-tenths pounds VOC per pounds solids.
- (4) The source shall complete a work practice implementation plan within sixty (60) calendar days after the source's compliance date as specified in 40 CFR 63.803. The plan must detail how the source will incorporate environmentally desirable practices into the operation.
- (5) A semi-annual summary report shall be prepared and submitted to IDEM, OAM, to document the ongoing compliance status of the wood furniture coating operations.

State Rule Applicability

326 IAC 2-1-3.4 (New Source Toxics Control)

This modification is not subject to 326 IAC 2-1-3.4, because it is subject to the NESHAP, 326 IAC 20-14, (40 CFR 63, Subpart JJ).

326 IAC 2-2 (Prevention of Significant Deterioration)

This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories. This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons/yr of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

326 IAC 6-3-2(c) (Process Operations)

- (a) Pursuant to 326 IAC 6-3-2(c), the PM emissions from each of the twelve (12) wood surface coating booths shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E=4.10P^{0.67} \quad \text{Where } E=\text{rate of emission in pounds per hour; and} \\ P=\text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2(c), the PM emissions from the router and sander in the woodworking operation shall be limited to 0.86 pounds per hour based on a process weight rate of 0.098 tons per hour and the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour} \\ = 0.098 \text{ tons per hour}$$

$$E = 4.10(0.098)^{0.67} = 0.86 \text{ pounds per hour}$$

Total potential emissions from the woodworking operation, which includes the router and sander, are 2.67 tons per year or 0.61 pounds per hour, therefore, the woodworking operation will comply with 326 IAC 6-3-2.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating applied to wood furniture shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system. This source uses air assisted airless spray application equipment for wood furniture surface coating, and is therefore in compliance with 326 IAC 8-2-12.

326 IAC 8-11 (Wood Furniture Coatings)

This modification is not subject to the requirements of 326 IAC 8-11 because the source is not located in Lake, Porter, Clark, or Floyd Counties.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This proposed modification will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows: The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL) developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) does not have at this time any specific statutory or regulatory authority over these substances.

Air Toxics Analysis

Pollutant	Rate (lb/hr)	Rate @ 8,760 hr/yr (ton/yr)	Modeled Concentration (Fg/m ³)	OSHA PEL (Fg/m ³)	% OSHA PEL
Xylene	2.30	10.06	3,387	435,000	0.23
MEK	0.28	1.22	3,387	590,000	0.02
Toluene	3.14	13.76	3,387	752,000	0.18
Ethylbenzene	0.54	2.37	3,387	435,000	0.05
Methanol	1.15	5.03	3,387	260,000	0.19
Cumene	0.01	0.03	3,387	245,000	0.00
Formaldehyde	0.11	0.47	3,387	930	4.92

Methodology:

Rate ton/yr = (rate lb/hr)*(hr/yr of operation)*(ton/2000 lbs)

- (b) See attached spreadsheets for detailed air toxic calculations (Appendix A, pages 3 and 4)

Conclusion

The construction of this modification to the existing hospital furniture and support furniture manufacturing operation will be subject to the conditions of the attached proposed **Construction Permit No. CP-137-9710-00002**.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Hill-Rom Company, Inc.
Source Location: 1125 East Pearl Street, Batesville, Indiana 47006
County: Ripley
Construction Permit No.: CP-137-9710-00002
SIC Code: 2599
Permit Reviewer: Trish Earls/EVP

On June 24, 1998, the Office of Air Management (OAM) had a notice published in the Herald Tribune, Batesville, Indiana, stating that Hill-Rom Company, Inc. had applied for a construction permit to construct and operate a twelve (12) wood furniture surface coating booths with dry filters as air pollution control and a router and sander, each with dust collectors for particulate matter control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAM has decided to make the following changes to the Construction Permit:

1. Since the wood furniture surface coating operation is subject to 40 CFR 63.800-63.808, Subpart JJ, it is also subject to the notification requirements of 40 CFR 63.9. Therefore, a new construction condition No. 7 was added to include the requirements of 40 CFR 63.9. The construction condition that was previously identified as number 7 is now number 8. Construction condition No. 7 now reads as follows:

NESHAP Reporting Requirement
7. That pursuant to the National Emission Standard for Hazardous Air Pollutants (NESHAP), Part 63.800 - 63.808, Subpart JJ, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - (a) Commencement of construction date (no later than 30 days after such date);
 - (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - (c) Actual start-up date (within 15 days after such date); and
 - (d) Date of performance testing (at least 60 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 63 are also federally enforceable.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Hill-Rom Company, Inc.
1069 State Road 46E
Batesville, Indiana 47006-9167

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Hill-Rom Company, Inc., 1125 East Pearl Street, Batesville, Indiana, 47006, has constructed the twelve (12) wood furniture surface coating booths, the router, and the sander in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on April 24, 1998, and as permitted pursuant to **Construction Permit No. CP-137-9710, Plant ID No. 137-00002** issued on _____.
5. I hereby certify that Hill-Rom Company, Inc. is subject to the Title V program and has submitted a Title V operating permit application (T-137-6026-00002) on June 3, 1996. The equipment covered under this permit shall be incorporated in the submitted Part 70 application.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 19 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Appendix A: Emission Calculations Emissions Summary

Company Name: Hill-Rom Company, Inc.
Address City IN Zip: 1125 East Pearl Street, Batesville, Indiana 47006
CP: 137-9710
Pit ID: 137-00002
Reviewer: Trish Earls
Date: May 1, 1998

Allowable Emissions Definition (tons/year)

Emissions Generating Activity			
Pollutant	Surface Coating	Woodworking	TOTAL
PM	17.66	2.67	20.3
PM-10	17.66	2.67	20.3
SO ₂	0.00	0.00	0.0
NO _x	0.00	0.00	0.0
VOC	142.74	0.00	142.7
CO	0.00	0.00	0.0
HAPs	32.92	0.00	32.9

Total emissions based on rated capacity at 8,760 hours/year.

New Source PSD Definition (tons/year)

Emissions Generating Activity			
Pollutant	Surface Coating	Woodworking	TOTAL
PM	1.41	2.67	4.1
PM-10	1.41	2.67	4.1
SO ₂	0.00	0.00	0.0
NO _x	0.00	0.00	0.0
VOC	142.74	0.00	142.7
CO	0.00	0.00	0.0
HAPs	32.92	0.00	32.9

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emission Calculations
VOC and Particulate
From Surface Coating**

Company Name: Hill-Rom Company, Inc.
Address City IN Zip: 1125 East Pearl Street, Batesville, Indiana 47006
CP: 137-9710
Pit ID: 137-00002
Reviewer: Trish Earls
Date: May 1, 1998

State Potential Emissions (uncontrolled):																	
Material (as applied)	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency	
Surface Coating																	
Wipe Stain 546-D1-2909C	8.00	63.72%	0.00%	63.72%	0.00%	21.92%	0.030	30.00	5.1	5.10	4.59	110.11	20.09	2.86	31.01	75.00%	
Wipe Stain 546-WI-3493B	8.34	60.48%	0.00%	60.48%	0.00%	22.65%	0.030	30.00	5.0	5.04	4.54	108.95	19.88	3.25	29.69	75.00%	
Wipe Stain 546-D1-3323A	8.39	59.11%	0.00%	59.11%	0.00%	23.80%	0.030	30.00	5.0	4.96	4.46	107.12	19.55	3.38	27.78	75.00%	
Wipe Stain 546-D1-3419	8.36	50.04%	0.00%	50.04%	0.00%	36.07%	0.030	30.00	4.2	4.18	3.77	90.36	16.49	4.12	15.46	75.00%	
Wipe Stain 560-D5-4908	7.80	67.13%	0.00%	67.13%	0.00%	19.70%	0.030	30.00	5.2	5.24	4.71	113.10	20.64	2.53	35.44	75.00%	
Wipe Stain 542-D5V-1666	8.18	62.31%	0.06%	62.25%	0.06%	21.64%	0.030	30.00	5.1	5.09	4.58	109.99	20.07	3.04	31.37	75.00%	
NGR Stain 506-D5V-639	6.61	99.62%	32.15%	67.47%	25.51%	0.25%	0.020	30.00	6.0	4.46	2.68	64.22	11.72	0.02	2378.54	75.00%	
NGR Stain 506-D5V-638	6.68	99.13%	29.37%	69.76%	23.55%	0.61%	0.020	30.00	6.1	4.66	2.80	67.10	12.25	0.04	1018.57	75.00%	
NGR Stain 506-D5V-497	6.64	99.30%	31.23%	68.07%	24.89%	0.44%	0.020	30.00	6.0	4.52	2.71	65.09	11.88	0.03	1369.65	75.00%	
NGR Stain 506-D5-251	6.62	99.60%	23.92%	75.68%	19.01%	0.24%	0.020	30.00	6.2	5.01	3.01	72.14	13.17	0.02	2783.34	75.00%	
NGR Stain 506-D5V-42B	6.70	98.77%	1.00%	97.77%	0.80%	0.78%	0.020	30.00	6.6	6.55	3.93	94.33	17.21	0.05	1119.76	75.00%	
NGR Stain 506-D5V-1159	6.60	99.75%	32.17%	67.58%	25.49%	0.15%	0.020	30.00	6.0	4.46	2.68	64.23	11.72	0.01	3964.69	75.00%	
NGR Stain 543-D6-699	7.39	98.36%	0.00%	98.36%	0.00%	1.17%	0.020	30.00	7.3	7.27	4.36	104.67	19.10	0.08	828.35	75.00%	
Toner 371-D5V-610	6.90	93.74%	14.03%	79.71%	11.62%	3.76%	0.020	30.00	6.2	5.50	3.30	79.20	14.45	0.28	195.04	75.00%	
Toner 373-D5V-2136	7.72	82.54%	21.40%	61.14%	19.83%	6.00%	0.020	30.00	5.9	4.72	2.83	67.97	12.40	0.89	104.89	75.00%	
Sealer 831-F5V-83A	7.68	72.12%	6.25%	65.87%	5.76%	21.17%	0.030	65.00	5.4	5.06	9.86	236.75	43.21	4.57	31.86	75.00%	
Sealer Catalyst 830-PJ1-1019E	9.06	39.00%	0.00%	39.00%	0.00%	46.35%	0.002	65.00	3.5	3.53	0.44	10.47	1.91	0.75	10.16	75.00%	
Top Coat 830-55L5-1394	7.91	61.44%	0.00%	61.44%	0.00%	29.50%	0.030	65.00	4.9	4.86	9.48	227.44	41.51	6.51	21.97	75.00%	
Top Coat Catalyst 830-PJ1-1019E	9.06	39.00%	0.00%	39.00%	0.00%	46.35%	0.002	65.00	3.5	3.53	0.44	10.47	1.91	0.75	10.16	75.00%	
Adhesives																	
Tite Bond 100261	9.67	57.70%	57.60%	0.10%	66.87%	42.20%	0.003	65.00	0.0	0.01	0.00	0.05	0.01	0.00	0.02	100.00%	
Total State Potential Emissions:											32.59	782.16	142.74	17.66			
Federal Potential Emissions (controlled):																	
										Control Efficiency:		Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr		
										VOC	PM						
Total Federal Potential Emissions:										N/A	92.00%	32.59	782.16	142.74	1.41		

Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids) * Transfer Efficiency
Total = Sum of worst case coatings used + other solvents
Controlled emission rate = uncontrolled emission rate * (1 - control efficiency)

Appendix A: Emission Calculations HAP Emission Calculations (Page 2 of 2)

Company Name: Hill-Rom Company, Inc.
Address City IN Zip: 1125 East Pearl Street, Batesville, Indiana 47006
CP: 137-9710
Plt ID: 137-00002
Reviewer: Trish Earls
Date: May 1, 1998

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Xylene Emissions (ton/yr)	MEK Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Methanol Emissions (ton/yr)	Cumene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Pound VHAP per Pound Solids
Surface Coating											
Wipe Stain 546-D1-2909C	8.00	0.030	30.00	1.06	0.00	0.80	0.24	0.00	0.02	0.00	0.2
Wipe Stain 546-WI-3493B	8.34	0.030	30.00	1.03	0.00	0.81	0.22	0.00	0.02	0.00	0.2
Wipe Stain 546-D1-3323A	8.39	0.030	30.00	0.66	0.00	0.80	0.14	0.00	0.02	0.00	0.1
Wipe Stain 546-D1-3419	8.36	0.030	30.00	1.53	0.00	1.70	0.35	0.00	0.02	0.00	0.2
Wipe Stain 560-D5-4908	7.80	0.030	30.00	0.96	0.00	0.56	0.21	0.00	0.02	0.00	0.2
Wipe Stain 542-D5V-1666	8.18	0.030	30.00	0.39	0.00	0.30	0.08	0.00	0.03	0.00	0.1
NGR Stain 506-D5V-639	6.61	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 506-D5V-638	6.68	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 506-D5V-497	6.64	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 506-D5-251	6.62	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 506-D5V-42B	6.70	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 506-D5V-1159	6.60	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
NGR Stain 543-D6-699	7.39	0.020	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Toner 371-D5V-610	6.90	0.020	30.00	0.00	0.47	0.05	0.00	0.00	0.00	0.00	0.5
Toner 373-D5V-2136	7.72	0.020	30.00	0.01	1.22	0.61	0.00	0.00	0.00	0.00	0.5
Sealer 831-F5V-83A	7.68	0.030	65.00	5.06	0.00	8.96	1.20	0.00	0.00	0.21	0.8
Sealer Catalyst 830-PJ1-1019E	9.06	0.002	65.00	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.8
Top Coat 830-55L5-1394	7.91	0.030	65.00	3.45	0.00	2.49	0.82	0.00	0.00	0.25	0.3
Top Coat Catalyst 830-PJ1-1019E	9.06	0.002	65.00	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.8
Adhesives											
Tite Bond 100261	9.67	0.003	65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
				10.06	1.22	13.76	2.37	5.03	0.03	0.47	

Total State Potential Emissions:

32.92

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Total = Sum of worst case coatings used + other solvents used.

Pound VHAP per Pound Solids = Weight % VHAP / Weight % Solids