



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: December 30, 2010

RE: Forest River Inc., Shasta Division / 039-29945-00094

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 1/2/08



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Mr. William G. Conway
Forest River Inc., Shasta Division
P.O. Box 3030
Elkhart, IN 46515

December 30, 2010

Re: 039-29945-00094
Second Registration Notice-Only Change to
R039-18601-00094

Dear Mr. Conway:

Forest River Inc., Shasta Division was issued a Registration No.: R039-18601-00094 on February 10, 2004 for a stationary pull-type Recreational Vehicle assembly and surface coating operation located at 105 County Road 14, Middlebury, IN 46540. On November 30, 2010, the Office of Air Quality (OAQ) received a letter relating to construction and operation of a new lamination line. The new lamination line has a potential to emit 0.008 tons of VOC and HAPs per year, as discussed in the attached Technical Support Document (TSD). The addition of this lamination line to the registration is considered a notice-only change, since the potential emissions of regulated criteria pollutants and hazardous air pollutants are less than the ranges specified in 326 IAC 2-5.5-6(d)(10) and 326 IAC 2-5.5-6(d)(12), respectively. The uncontrolled/unlimited potential to emit of the entire source will continue to be within the threshold levels specified in 326 IAC 2-5.5-1(b)(1).

Pursuant to 326 IAC 2-5.5-6, the registration is hereby revised as described in the attached Technical Support Document (TSD).

The source shall continue to operate according to 326 IAC 2-5.5. Please find enclosed the revised registration. A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.
If you have any questions on this matter, please contact Bruce Farrar, at (800) 451-6027, press 0 and ask for Bruce Farrar or extension 4-5401, or dial (317) 234-5401.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/bf

Attachment: Revised Registration and TSD

cc: File - Elkhart County
Elkhart County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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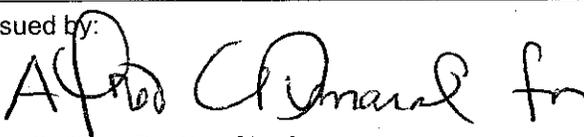
REGISTRATION OFFICE OF AIR QUALITY

Forest River Inc., Shasta Division
105 County Road 14
Middlebury, Indiana 46540

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 039-18601-00094	
Original signed by: Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: February 10, 2004

First Registration Notice-Only Change No. 039-29659-00094, issued October 21, 2010

Second Registration Notice-Only Change No. 039-29945-00094	
Issued by:  Iryn Calilung Section Chief Permits Branch Office of Air Quality	Issuance Date: December 30, 2010

SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary pull-type Recreational Vehicle assembly and surface coating operation.

Source Address:	105 County Road 14, Middlebury, IN 46540
General Source Phone Number:	(260) 450-2363
SIC Code:	3792
County Location:	Elkhart County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

Building 53

- (a) One (1) Recreational Vehicle (RV) assembly area, with a maximum production capacity of 1.5 vehicles per hour, including the following:
 - (1) One (1) spray coating area for airless spray coating operation using WD-40 and clear spray on enamel.
 - (2) Manual surface coating operation (non-spray) including extrusion, roll coating, brushing and wiping.
- (b) One (1) woodworking area, including the following equipment: one (1) pin router, two (2) belt sanders, three (3) drill presses, two (2) band saws, two (2) radial arm saws, one (1) table saw, eight (8) miter saws (chop saws), one (1) grove router, equipped with a cyclone, processing 200 pounds per hour of lumber.

Building 54

- (c) One (1) Recreational Vehicle (RV) assembly area, with a maximum production capacity of 1.5 vehicles per hour, including the following:
 - (1) One (1) spray coating area for airless spray coating operation using WD-40 and clear spray on enamel.
 - (2) Manual surface coating operation (non-spray) including extrusion, roll coating, brushing and wiping.
- (d) One (1) woodworking area, including the following equipment: one (1) pin router, two (2) belt sanders, three (3) drill presses, two (2) band saws, two (2) radial arm saws, one (1) table saw, eight (8) miter saws (chop saws), one (1) grove router, equipped with a cyclone, processing 200 pounds per hour of lumber.

- (e) Five (5) natural gas-fired space heaters, with a total maximum heat input capacity of 2.2 mmBtu/hr.

- (f) One (1) lamination line, identified as L-1, approved for construction in 2010, using flow coating with a maximum capacity of 4.5 panels (30 ft x 7 ft per panel) per hour, using no controls, and exhausting indoors.

SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (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 registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 039-18601-00094 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

Building 53

- (a) One (1) Recreational Vehicle (RV) assembly area, with a maximum production capacity of 1.5 vehicles per hour, including the following:
 - (1) One (1) spray coating area for airless spray coating operation using WD-40 and clear spray on enamel.
 - (2) Manual surface coating operation (non-spray) including extrusion, roll coating, brushing and wiping.
- (b) One (1) woodworking area, including the following equipment: one (1) pin router, two (2) belt sanders, three (3) drill presses, two (2) band saws, two (2) radial arm saws, one (1) table saw, eight (8) miter saws (chop saws), one (1) grove router, equipped with a cyclone, processing 200 pounds per hour of lumber.

Building 54

- (c) One (1) Recreational Vehicle (RV) assembly area, with a maximum production capacity of 1.5 vehicles per hour, including the following:
 - (1) One (1) spray coating area for airless spray coating operation using WD-40 and clear spray on enamel.
 - (2) Manual surface coating operation (non-spray) including extrusion, roll coating, brushing and wiping.
- (d) One (1) woodworking area, including the following equipment: one (1) pin router, two (2) belt sanders, three (3) drill presses, two (2) band saws, two (2) radial arm saws, one (1) table saw, eight (8) miter saws (chop saws), one (1) grove router, equipped with a cyclone, processing 200 pounds per hour of lumber.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the daily volume-weighted average volatile organic compound (VOC) content of coating delivered to the applicators when coating metal at the one (1) RV assembly line shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.
- (b) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:
 - (1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

- (2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.
- (3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.
- (4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.
- (5) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the woodworking facilities shall not exceed 1.39 pounds per hour when operating at a process weight rate of 400 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

Where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 2-5.5-4]

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limit in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [\sum (c \times U) / \sum U]$$

Where:

A is the volume weighted average in pounds VOC per gallon less water as applied;

C is the VOC content of the coating in pounds VOC per gallon less water as applied; and

U is the usage rate of the coating in gallons per day.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.6 Record Keeping Requirements

To document the compliance status with Condition D.1.1 the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.1.1.

- (a) The VOC content of each coating material and solvent used less water.
 - (b) The amount of coating material and solvent used on daily basis.
 - (1) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (2) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvent.
 - (c) The volume weighted average VOC content of the coatings used for each day;
 - (d) The daily cleanup solvent usage; and
-
- (e) The total VOC usage for each day.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Forest River Inc., Shasta Division
Address:	105 County Road 14
City:	Middlebury, IN 46540
Phone Number:	(260) 450-2363
Registration No.:	039-18601-00094

I hereby certify that Forest River Inc., Shasta Division is still in operation.
 no longer in operation.

I hereby certify that Forest River Inc., Shasta Division is in compliance with the requirements
of Registration No. 039-18601-00094.
: not in compliance with the requirements
of Registration No. 039-18601-00094.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration Notice Only Change (NOC)

Source Description and Location

Source Name:	Forest River Inc., Shasta Division
Source Location:	105 14th Street, Middlebury, IN 46540
County:	Elkhart
SIC Code:	3792
Registration No.:	039-18601-00094
Registration Issuance Date:	February 10, 2004
Registration NOC No.:	039-29945-00094
Permit Reviewer:	Bruce Farrar

On November 30, 2010, the Office of Air Quality (OAQ) received a letter from Forest River Inc. Shasta Division related to a modification to an existing modular home manufacturing source.

Existing Approvals

The source was issued Registration No. 039-18601-000940 on February 10, 2004. The source has since received Notice-Only Change No. 039-29659-00094, issued on October 21, 2010.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

- (a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Elkhart 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.

- (b) **PM_{2.5}**
 Elkhart County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
 Elkhart County has been classified as attainment or unclassifiable in Indiana for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Space Heaters	0.10	0.10	0.10	0.006	1.00	0.10	0.80	negl.	negl.
Woodworking	4.13	4.13	4.13	-	-	-	-	-	-
Surface Coating	0.02	0.02	0.02	-	-	11.02	0.80	3.65	3.28 Hydrocarbon
Total PTE of the Entire Source	4.25	4.25	4.25	0.006	1.00	11.12	0.80	<25	<10
Registration Levels	25	25	25	25	25	25	100	25	10

negl. = negligible
 These emissions are based upon IDEM OAQ Registration No.: 039-18601-00094 issued February 10, 2004.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Forest River Inc., Shasta Division on November 30, 2010, relating to the construction of a lamination line in building 54.

The following is a list of the new emission unit:

- (a) One (1) lamination line, identified as L-1, approved for construction in 2010, with a maximum capacity of 4.5 panels (30 ft x 7 ft panel) per hour, using no controls, and exhausting indoors.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

The lamination line uses two (2) chemicals for the lamination process. Termolock LHM7749 is a solid industrial hot melt adhesive containing no VOCs or HAPs. Macroplast SIA-116 is a single component, solvent free, moisture curable, liquid polyurethane adhesive. It cures with water. It contains up to 30% of Methylenebis (phenylisocyanate) (MDI) (CAS 101-68-8) which is a VOC and HAP.

Macroplast SIA-116 does not act like a unitary coating. A unitary coating is a resin dissolved in a "vehicle" which is generally a mixture of solvents - usually aromatics such as toluene, xylene, and ethyl benzene. With a unitary coating the "vehicle" flashes off leaving a layer of resin which then partially oxidizes to form a resistant coating. Macroplast SIA-116 adhesive is a moisture cured urethane adhesive which cures when exposed to water. As the adhesive is applied, it absorbs moisture from the air to catalyze the MDI/PMDI mixture. Forest River, Inc. Bead Laminators mix water directly into the adhesive immediately prior to application in order to promote rapid polymerization. With the direct water mixing, the adhesive can be expected to be essentially polymerized to completion within two minutes. The chemical reaction is expressed as:



Evaporation of unreacted MDI can only take place during the interval between application of the adhesive from its container and the point at which it is completely reacted - in this case about 2 minutes (0.033 hr).

Using the engineering calculations provided by the Society of Plastic Industry, we can calculate the emissions as follows:

- The largest panel that can be handled by the press is 30' x 7' (19.5 m²)
- Maximum production 4.5 panels per hour (1560 m²/hr)
- "Tack free" temperature is 80 F
- "Tack free" time is 120 seconds

Note: "Tack free time is the time until no more unreacted MDI is present in the adhesive. "Tack free" temperature is the temperature of the adhesive when all the MDI has reacted. "Tack free" time determines the production rate. Air speed across the coated surfaces is 3 meters/sec.

From the emission calculation published by the Society of the Plastics Industry:

$$W = \frac{(25.4)(PT^0)(MT)(\mu^{0.78})(A)}{T}$$

Where:

W	is the evaporation rate in grams/second
PT ⁰	is the liquid vapor pressure in atmospheres
MT	is the average molecular weight (for MDI=250)
T	is the temperature in degrees Kelvin
μ	is the air speed across the curing adhesive in m/sec
A	is exposed area in square meters

Permit Level Determination – Registration Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-5.5-6. This table reflects the PTE before controls of the proposed revision.

Process/ Emission Unit	PTE of Proposed Notice Only Change (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Lamination Line	-	-	-	-	-	0.003	-	0.003	0.003 (MDI)
Total PTE of Proposed Revision	-	-	-	-	-	0.003	-	0.003	0.003 (MDI)
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

This Registration is being revised through a notice-only change, since the potential emissions of regulated criteria pollutants and hazardous air pollutants are less than the ranges specified in 326 IAC 2-5.5-6(d)(10) and 326 IAC 2-5.5-6(d)(12), respectively. The uncontrolled/unlimited potential to emit of the entire source will continue to be within the threshold levels specified in 326 IAC 2-5.5-1(b)(1).

PTE of the Entire Source After Issuance of the Registration Revision

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units.

Process/ Emission Unit	Potential To Emit of the Entire Source with the NOC (tons/year)								
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Space Heaters	0.10	0.10	0.10	0.006	1.00	0.10	0.80	negl.	negl.
Woodworking	4.13	4.13	4.13	-	-	-	-	-	-
Surface Coating	0.02	0.02	0.02	-	-	11.02	0.80	3.65	3.28 Hydrocarbon
Lamination Line	-	-	-	-	-	0.003	-	0.003	0.003 (MDI)
Total PTE of the Entire Source	4.25	4.25	4.25	0.006	1.00	41.12 11.123	0.80	<25	<10
Registration Levels	25	25	25	25	25	25	100	25	10
negl. = negligible These emissions are based upon IDEM OAQ Registration No.: 039-18601-00094 issued February 10, 2004.									

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Space Heaters	0.10	0.10	0.10	0.006	1.00	0.10	0.80	negl.	negl.
Woodworking	4.13	4.13	4.13	-	-	-	-	-	-
Surface Coating	0.02	0.02	0.02	-	-	11.02	0.80	3.65	3.28 Hydrocarbon
Lamination Line	-	-	-	-	-	0.003	-	0.003	0.003 (MDI)
Total PTE of the Entire Source	4.25	4.25	4.25	0.006	1.00	11.122	0.80	<25	<10
Registration Levels	25	25	25	25	25	25	100	25	10

negl. = negligible
 * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

- (a) This revision will not change the registration status of the source, because the uncontrolled/unlimited potential to emit of all pollutants from the entire source will still be within the ranges listed in 326 IAC 2-5.5-1(b)(1) and the PTE of all other regulated criteria pollutants will still be less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source will still be subject to the provisions of 326 IAC 2-5.5 (Registrations).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations (40 CFR 60.390 Subpart MM (2M)), are not included for this proposed notice only change, because this source is not an automobile or light-duty truck assembly plant.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed notice only change.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR 63.3880, Subpart MMMM (4M)) are not included for this proposed revision, because this source is not a major source for HAPs.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, (40 CFR 63.11169, Subpart HHHHHH (6H)), are not included for this proposed revision, because the

lamination line does not perform paint stripping using paint strippers that contain methylene chloride (MeCl), performs autobody refinishing operations, or uses a spray application.

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants for Area Source Standards for Nine Metal Fabrication and Finishing Source Categories (40 CFR 63, Subpart XXXXXX (6X)), are not included for this proposed revision, because this source's SIC is not listed.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The state rules applicable to the existing emission units at this source will not change as a result of this notice only change.

The following state rules are applicable to the proposed notice only change:

- (a) 326 IAC 2-5.5 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed notice only change is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

Lamination Line

- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The lamination line, identified as L-1, uses flow coating as an applicator, therefore, pursuant to 326 IAC 6-3-1(b)(7), 326 IAC 6-3-2 does not apply to the lamination line.
- (g) 326 IAC 8-2 (Surface Coating Emission Limitations)
The lamination line, identified as L-1, is not subject to the requirements of 326 IAC 8-2, because the lamination line does not have potential emissions of greater than fifteen (15) pounds of VOC per day before add on controls.
- (h) There are no other 326 IAC 8 Rules that are applicable to the lamination line.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

Building 54

- (c) One (1) Recreational Vehicle (RV) assembly area, with a maximum production capacity of 1.5 vehicles per hour, including the following:
 - (1) One (1) spray coating area for airless spray coating operation using WD-40 and clear spray on enamel.
 - (2) Manual surface coating operation (non-spray) including extrusion, roll coating, brushing and wiping.
- (d) One (1) woodworking area, including the following equipment: one (1) pin router, two (2) belt sanders, three (3) drill presses, two (2) band saws, two (2) radial arm saws, one (1) table saw, eight (8) miter saws (chop saws), one (1) grove router, equipped with a cyclone, processing 200 pounds per hour of lumber.
- (e) Five (5) natural gas-fired space heaters, with a total maximum heat input capacity of 2.2 mmBtu/hr.
- (f) **One (1) lamination line, identified as L-1, approved for construction in 2010, using flow coating with a maximum capacity of 4.5 panels (30 ft x 7 ft per panel) per hour, using no controls, and exhausting indoors.**

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on November 30, 2010.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed Registration Revision No. 039-29945-00094. The staff recommends to the Commissioner that this Registration Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Bruce Farrar at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5401 or toll free at 1-800-451-6027 extension 4-5401 .
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
Summary**

Company Name: Forest River, Inc., Shasta Division
Address City IN Zip: 105 14th Street, Middlebury, IN 46540
FESOP No: 039-29945-00094
Plt ID: 039-00094
Permit Reviewer: Bruce Farrar
Date: November 30, 2010

	PM	PM10 ²	PM2.5 ²	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Total PTE before revision ¹	4.25	4.25	4.25	0.01	1.00	11.12	0.80	3.65	3.28
									Hydrocarbon
Lamination Line	-	-	-	-	-	0.003	-	0.003	0.003
									MDI
Totals After Revisions	4.25	4.25	4.25	0.01	1.00	11.12	0.80	3.65	

1. PTE from Permit #039-18601-00094, issued February 10, 2004.

The total PTE before revisions summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits.

2. Assume PM=PM10 =PM2.5

Appendix A: Emission Calculations
VOC from RV Roof and Wall Lamination Press located at Plant 1

Company Name: Forest River, Inc., Shasta Division
Address City IN Zip: 105 14th Street, Middlebury, IN 46540
MSOP Renewal No. 039-29945-00094
Pit ID: 039-00094
Reviewer: Bruce Farrar
Date: November 30, 2010

Reaction:

30% MDI + 70% PMDI + Water ----> 100% PMDI + Water + heat

Assume all VOC is MDI

W = 1.68077E-05 Evaporation rate grams/second
 W = 1.331E-04 Evaporation rate pounds/hour

4.5 panels per hour * W = 5.990E-04 VOC/HAP pounds/hour
 hourly emissions * (8760 hours/year * (1 ton/2000 lbs): 2.624E-03 VOC/HAP tons/year

Assume all MDI is lost without reaction:

METHODOLOGY

The evaporation rate was determined using an equation developed by the Society of Plastic Industry (see TSD for more detail).

This methodology was used to determine the evaporation rate for a similar lamination process located at the Forest River, Inc. Millersburg facility (OAQ Permit #039-26183-00471, issued July 8, 2008).

$$W = ((25.4) * (P_t^0) * (M_T) * (\mu^{0.78}) * (A)) / T$$

W = evaporation rate in grams/second)

P_t⁰ = liquid vapor pressure in atmospheres 1.31E-5mmHg * (1atm/760mmHg = 1.72-8 atm)

M_T = average molecular weight (MDI = 250)

T = temperature in degrees Kelvin (K° = (80°F - 32°F)*(5/9) +273 = 299)

μ = air speed across the curing adhesive in m/seconds (3 meters/second^{0.78} = 2.356)

A = exposed area in square meters ((30ft*7ft)* 0.093 m²/ft² = 19.53 m²)

evaporation rate = emission factor

Assume all VOC is MDI and VOC = HAP

VOC lbs/hr = VOC emission factor * panels per hour

VOC tons/yr = VOC lbs/hr * (8760 hrs/1yr) * (1 ton/2000 lbs)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: William G. Conway
Forest River Inc., Shasta Division
P.O. Box 3030
Elkhart, IN 46515

DATE: December 30, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Registration
039-29945-00094

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 12/30/2010 Forest River Inc., Shasta Division 039-29945-00094 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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1		William G. Conway Forest River Inc., Shasta Division PO Box 3030 Elkhart IN 46515 (Source CAATS)via confirmed delivery										
2		Elkhart County Health Department Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)										
3		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
4		Middlebury Town Council and Town Manager P.O. Box 812, 418 North Main Street Middlebury IN 46540 (Local Official)										
5		Bristol Town Council and Town Manager P.O. Box 122 Bristol IN 46507 (Local Official)										
6		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)										
7		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
8												
9												
10												
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