



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: July 16, 2012

RE: Meti-Span / 145-31855-00064

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

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

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 from 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
FNPER-AM.dot12/3/07



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Mr. Jack Pender
Metl-Span LLC
1717 McCall Drive
Shelbyville, Indiana 46176

July 15, 2012

Re: 145-31855-00064
Third Notice-Only Change to Registration
R145-20058-00064

Dear Mr. Pender:

Metl-Span LLC was issued a Registration No. R145-20058-00064 on October 29, 2004, for a stationary polyurethane foam production operation located at 1717 McCall Drive, Shelbyville, Indiana. On May 11, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to add a mineral wool line that is similar to the existing polyurethane foaming operation. The additional of this unit will increase negligible VOC (less than 0.01 tons per year) see Appendix A for the calculations. The addition of this unit 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). 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). No new state rules are applicable to this source. There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this notice-only change.

Pursuant to 326 IAC 2-5.5-6, the registration is hereby revised as follows, with deleted language as strikeouts and new language **bolded**:

The description of the unit has been added to the A.2 Emission units and Pollution Control Equipment Summary and Section D.1 in the registration as follows:

- (g) **Polyurethane foaming, identified as emission unit 6, approved for construction in 2012, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb/year of MDI, and exhausting to stack D.**

SECTION D.1

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

.....

- (g) **Polyurethane foaming, identified as emission unit 6, approved for construction in 2012, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb/year of MDI, and exhausting to stack D.**

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

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see Appendix A for detailed calculations). This did not require any changes to the registration.

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 Ms. Renee Traivaranon, at (800) 451-6027, press 0 and ask for extension 4-5615, or dial (317) 234-5615.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/rt

Attachment: Revised Registration
Appendix A Calculations

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



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REGISTRATION OFFICE OF AIR QUALITY

Metl-Span LLC
1717 McCall Drive
Shelbyville, Indiana 46176

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. 145-20058-00064	
Issued by: Original signed by Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: October 29, 2004

First Notice-Only Change No.: 145-25472-00064, issued November 21, 2007
Second Notice-Only Change No. 145-29629-00064, issued on January 18, 2011

Third Notice-Only Change No. 145-31855-00064	
Issued by:  Iryn Callung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 16, 2012

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 polyurethane foam production operation.

Source Address:	1717 McCall Drive, Shelbyville, Indiana 46176
General Source Phone Number:	317-398-1100
SIC Code:	3448 (Prefabricated Metal Buildings and Components)
County Location:	Shelby 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:

- (a) Polyurethane foaming, identified as emission unit 1, constructed in 2004, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb/year of MDI, and exhausting to stack A.
- (b) Natural gas burner for building heat, identified as emission unit 2, constructed in 2004, with a maximum capacity of 3.73 MMBtu/hr, and exhausting to stack vent C.
- (c) Natural Gas burner for process heat, identified as emission unit 3, constructed in 2004, with a maximum capacity of 2.38 MMBtu/hr, and exhausting to stack vent B.
- (d) Panel cutting saw, identified as emission unit 4, constructed in 2004, with a maximum capacity of 300 cuts per hour cutting 2" thick by 48" wide panels, using a Siemens PLC as control, and exhausting to a dust collection system.
- (e) One (1) wood cutting operation, identified as emission unit 5, constructed in 2010, using hand-held equipment to manufacture wood shipping crates, consisting of a band saw, chop saw and table saw, with a maximum process weight of 189.2 pounds per hour, using a canister dust collector (Grizzly G0548) as control, and exhausting inside the building.
- (f) Bulk chemical storage consisting of:
 - (1) Two (2) 5000 gallons MDI vertical storage tanks;
 - (2) Two (2) 5000 gallons Polyol horizontal storage tanks; and
 - (3) One (1) 5000 gallons HFC-134A blowing agent storage tank.
- (g) Polyurethane foaming, identified as emission unit 6, approved for construction in 2012, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb/year of MDI, and exhausting to stack D.

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 IDEM 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. 145-20058-00064 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)]:

- (a) Polyurethane foaming, identified as emission unit 1, constructed in 2004, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb / year of MDI, and exhausting to stack A.
- (b) Natural gas burner for building heat, identified as emission unit 2, constructed in 2004, with a maximum capacity of 3.73 MMBtu/hr, and exhausting to stack vent C .
- (c) Natural Gas burner for process heat, identified as emission unit 3, constructed in 2004, with a maximum capacity of 2.38 MMBtu/hr, and exhausting to stack vent B.
- (d) Panel cutting saw, identified as emission unit 4, constructed in 2004, with a maximum capacity of 300 cuts per hour cutting 2" thick by 48" wide panels, using a Siemens PLC as control, and exhausting to a dust collection system.
- (e) One (1) wood cutting operation, identified as emission unit 5, constructed in 2010, using hand-held equipment to manufacture wood shipping crates, consisting of a band saw, chop saw and table saw, with a maximum process weight of 189.2 pounds per hour, using a canister dust collector (Grizzly G0548) as control, and exhausting inside the building.
- (f) Bulk chemical storage consisting of:
 - (1) Two (2) 5000 gallons MDI vertical storage tanks;
 - (2) Two (2) 5000 gallons Polyol horizontal storage tanks; and
 - (3) One (1) 5000 gallons HFC-134A blowing agent storage tank.
- (g) Polyurethane foaming, identified as emission unit 6, approved for construction in 2012, with a maximum capacity of 6.3 lb/hr of HFC-134A (No VOC) and 0.6 lb/year of MDI, and exhausting to stack D.

(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 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of the following operations shall not exceed the pound per hour limits listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU4	Panel Cutting Operations	10.93	20.36
EU5	Wood Cutting Operation for Shipping Crates	0.09	0.82

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

Interpolation 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:

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

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

Compliance Determination Requirements

D.1.2 Particulate Control

- (a) To document compliance with Condition D.1.1, the Siemens PLC for particulate control shall be in operation and control emissions from the panel cutting saw (EU4) at all times when the panel cutting saw is in operation, in order to comply with this limit.
- (b) To document compliance with Condition D.1.1, the canister dust collector for particulate control shall be in operation and control emissions from the wood cutting operation for shipping crates (EU5) at all times when the wood cutting is in operation, in order to comply with this limit.

**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:	Metl-Span LLC
Address:	1717 McCall Drive
City:	Shelbyville, Indiana 46176
Phone Number:	317-398-1100
Registration No.:	145-20058-00064

I hereby certify that Metl-Span LLC is :

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. 145-20058-00064.
- not in compliance with the requirements of Registration No. 145-20058-00064.

I hereby certify that Metl-Span LLC is :

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:

Appendix A: Emission Calculations

Company Name: Metl-Span LLC
 Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
 Notice Only Change No.: 145-31855-00064
 Reviewer: Renee Traivaranon

Uncontrolled Potential Emissions (tons/year)

	POLLUTANT								HAPs Single	HAPS Total
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO2e		
Polyurethane Foaming Operations (EU1)	0.00	0.00	0.00	0.00	0.00	0.00005	0.00	-	0.01	0.001
Natural Gas Burner for Building Heat (EU2)	0.03	0.12	0.12	0.01	1.60	0.09	1.35	1,933.74	0.03	0.03
Natural Gas Burner for Process Heat (EU3)	0.02	0.08	0.08	0.01	1.02	0.06	0.86	1,233.86	0.02	0.02
Panel Cutting Operations (EU4)	4.93	4.93	4.93	0.00	0.00	0.00	0.00	-	0.00	0.00
Wood Cutting Operation (shipping crates) (EU5)	4.69	4.69	4.69	0.00	0.00	0.00	0.00	-	0.00	0.00
Polyurethane Foaming Operation (EU6)	0.00	0.00	0.00	0.00	0.00	0.00005	0.00	-	0.00	0.00
TOTAL	9.66	9.81	9.81	0.02	2.62	0.14	2.20	3,167.61	0.05	0.1

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

The operation of EU6 is equal to EU1.

Controlled Potential Emissions (tons/year)

	POLLUTANT								HAPs Single	HAPS Total
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO2e		
Polyurethane Foaming Operations (EU1)	0.00	0.00	0.00	0.00	0.00	0.00005	0.00	-	0.01	0.001
Natural Gas Burner for Building Heat (EU2)	0.03	0.12	0.12	0.01	1.63	0.09	1.37	1,933.74	0.03	0.03
Natural Gas Burner for Process Heat (EU3)	0.02	0.08	0.08	0.01	1.04	0.06	0.88	1,233.86	0.02	0.02
Panel Cutting Operations (EU4)	0.05	0.05	0.05	0.00	0.00	0.00	0.00	-	0.00	0.00
Wood Cutting Operation (shipping crates) (EU5)	0.09	0.09	0.09	0.00	0.00	0.00	0.00	-	0.00	0.00
Polyurethane Foaming Operation (EU6)	0.00	0.00	0.00	0.00	0.00	0.00005	0.00	-	0.00	0.00
TOTAL	0.19	0.34	0.34	0.02	2.67	0.15	2.25	3,167.61	0.05	0.1

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

The operation of EU6 is equal to EU1.

Appendix A: Emissions Calculations
Filling and Storage Emissions
Polyurethane Foaming Operation (EU1)+(EU6)
VOC Emissions

Company Name: Metl-Span LLC
Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
Notice Only Change No.: 145-31855-00064
Reviewer: Renee Traivaranon

The working losses can be estimated from the following expression:

$$L_w = Q_w * (1 / 359) * (273.15 / T_{amb}) * (V_{Pamb} / 760) * M_w * K_{mdi}$$

Where:

L_w Represents the working losses in lb/year.
Q_w Is the annual throughput of MDI pumped to the tank in ft³/year.
T_{amb} Is the storage temperature in °K.
V_{pamb} Is the vapor pressure of MDI at the storage temperature in mm Hg
M_w Is the molecular weight of MDI (250.26)
K_{mdi} Is the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the storage temperature.

Q _w	2,167,494.00 Kg/year	With density of MDI (from MSDS)	1.25 g/ml
	4,778,457.27 Lb/year		2709367.5 Lt/year
T _{amb}	20 °C		95640.67275 ft ³ /year
	253.15 °K		
M _w	250.26		
V _{P amb}	0.00000542 mm Hg		
K mdi	0.12	5% MDI	
L _w =	6.15644E-05 lb/year =	= 0.00000615644lbs/year	< 0 ton/year

Notes:

Pure MDI is a solid at room temperature and even though MDI/PMDI is a liquid at room temperature, both have a very low vapor pressure. There will be minor to almost negligible releases occurring during filling or storage due to changes in temperature from day to night.

Working losses occur when MDI/PMDI vapor that is present over the liquid in a storage tank is displaced from the tank by the addition of MDI/PMDI liquid during tank filling. A reasonable worst-case estimate of working losses can be made based on the size and number of storage tanks, the average storage temperature, and the number of times each tank is filled in one year.

The calculations that follow demonstrate that working losses of MDI/PMDI will be very low under most normal storage circumstances.

Appendix A: Emissions Calculations

Process Emissions

Polyurethane Foaming Operation (EU1)

VOC Emissions

Company Name: Metl-Span LLC

Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176

Notice Only Change No.: 145-31855-00064

Reviewer: Renee Traivaranon

The enclosed process losses can be estimated from the following expression:

$$Lc = Vair * (1 / 359) * (273.15 / Tproc) * (VPMDI / 760) * Mw * KMDI$$

Where:

- Lc Emissions lb./year.
- Vair Annual volume of displaced air in ft3/year.
- Tproc Process temperature in °K. (maximum temperature of the MDI).
- Vpmdi Vapor pressure of MDI in mm Hg. at process temperature.
- Mw 250.26 (this is the molecular weight of MDI).
- Kmdi Adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature.

Calculating Annual Volume of Displaced Air (Vair)

Blend consumed	690 kg/hr	Operation by year	6132 hrs
	1521.174 lb/hr	Line use factor	0.7

Consumed by year **9327838.968 lb/year**

- | | | | | | |
|----|---|--------------------|---------------------|---------------|------------|
| a) | Vair = (Area/piece)(No. Pieces/year)(Thickness) | Thickness | 6 inches | Size of panel | |
| | | | 0.1524 m | Wide | 1 m |
| | Vair | Area of panel | 6 m2/sheet | large | 6 m |
| | 224,284.03 m3/año | Line Speed | 4 m/min | | |
| | 7,920,500.88 ft3/año | sheet/hr | 4 m2/min | | |
| | | | 40 | | |
| b) | By volume of displaced air (length for wide multiplying by thickness) | Production by Year | 1,200,000 m2 | | |
| | Vair | | | | |
| | 182,880.00 m3/year | | | | |
| | 6,458,334.05 ft3/year | | | | |

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Natural Gas Burner for Building Heat (EU-2)
Company Name: Metl-Span LLC
Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
Permit Number: 145-31855-00064
Reviewer: Renee Traivaranon

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
3.7	1020	32.0

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	0.0	0.1	0.1	0.0	1.6	0.1	1.3

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.364E-05	1.922E-05	1.201E-03	2.883E-02	5.446E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	8.009E-06	1.762E-05	2.242E-05	6.086E-06	3.364E-05

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	1,922	0.0	0.0
Summed Potential Emissions in tons/yr	1,922		
CO2e Total in tons/yr	1,934		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Natural Gas Burner for Building Heat (EU-3)
Company Name: Metl-Span LLC
Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
Permit Number: 145-31855-00064
Reviewer: Renee Traivaranon

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
2.4	1020	20.4

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.0	0.1	0.1	0.0	1.0	0.1	0.9

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.146E-05	1.226E-05	7.665E-04	1.840E-02	3.475E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.110E-06	1.124E-05	1.431E-05	3.884E-06	2.146E-05

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	1,226	0.0	0.0
Summed Potential Emissions in tons/yr	1,226		
CO2e Total in tons/yr	1,234		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Process Particulate Emissions
Panel Cutting Saw (EU-4)
Company Name: Metl-Span LLC
Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
Notice Only Change No.: 145-31855-00064
Reviewer: Renee Traivaranon

Potential Emission (tons/year)				
Process	Total PM Collected at Dry Collector (pounds/hour)	Control Efficiency	Potential Hours per Year of Operation	Total Potential PM Emission (ton/year)
Panel Cutting	1.125	99.98%	8760	4.9285
Total PM Potential Emissions before control				4.93
Total PM Potential Emissions after control				0.05
Methodology				
PM Potential (ton/yr) = PM collected (lb/hr) / % collector efficiency * potential hours / 2000				
Total emissions based on rated capacity at 8,760 hours of operation per year and source controls.				
326 IAC 6-3-2 Compliance Calculation				
Process	Process Weight lbs/hr	Process Weight tons/hr	Emission Rate Allowable Limit lbs/hr	Potential Emission Rate lbs/hr
Panel Cutting (2" x 48" x 3m)	21865.22	10.93	20.36	0.011
				(Will comply)
Methodology				
E = (4.10 * P ^{0.67}) (For process weights less than 60,000 lbs/hr)				
where: E = allowable emission rate in lbs/hr				
P = process weight in tons/hr				

Appendix A: Process Particulate Emissions**Wood Cutting Operation (EU-5)****Company Name: Metl-Span LLC****Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176****Notice Only Change No.: 145-31855-00064****Reviewer: Renee Traivaranon**

Process	Potential PM Emissions (lb/hr)	Control Efficiency	Potential Hours of Operation (per year)	Total Potential PM Emissions Before Controls (tons/year)	Total Potential PM Emissions After Controls (tons/yr)
Wood Cutting (shipping crates)	1.07 *	99.98%	8760	4.69	1.09

Methodology

Potential PM Emissions (lb/hr) = * See next page of App. A on how this was arrived.

Total Potential PM Emissions before Control (ton/yr) = potential PM emissions (lb/hr) * potential hours of operation / 2000 tons/yr

Total PM Potential After Controls(ton/yr) = PM collected (lb/hr) / % collector efficiency * potential hours / 2000

Total emissions based on rated capacity at 8,760 hours of operation per year and source controls.

Appendix A: Process Particulate Emissions
Wood Cutting Operation (EU-5)
Company Name: Metl-Span LLC
Address City IN Zip: 1717 McCall Drive, Shelbyville, IN 46176
Notice Only Change No.: 145-31855-00064
Reviewer: Renee Traivaranon

Material Cut	Maximum material used per day (boards)	Maximum cuts per day *	Maximum volume of Sawdust generated per day (cu ft/day) **	Maximum weight of sawdust generated per day (lb/day) *** PTE	Maximum weight of sawdust generated per year (tons/year) *** PTE	PTE PM (lb/hr)
2 x 4's	270	810	0.47	7.97	1.45	
OSB/Plywood	75	300	1.04	17.71	3.23	
TOTAL			1.51	25.68	4.69	1.07

* Each 2 x 4 is cut 3 times and each OSB board is cut 4 times

**Volume of sawdust generated by 2x4 cut is LxWxD (4" x 1/8" x 2") = 0.0005787 cu ft.

**Volume of sawdust generated by OSB cut is LxWxD (8" x 1/8" x 0.5") = 0.0034722 cu ft.

L	W	D	Volume (cu in.)	Volume (cu ft)
4	0.125	2	1	0.0005787
96	0.125	0.5	6	0.0034722

*** assumes one cubic foot of sawdust weighs 17 pounds. This is also assumed to be 100% particulate emissions.

Maximum production = 30 skids per day (10 skids per 8 hour shift)
 Each skid includes 9 of (2x4s) and 2.5 of (4x8) OSB boards 1/2 inch thick

Methodology

Max material used per day = Number of skids per day * number of that size boards on skid

Max. cuts per day = number of boards used per day * number of cuts for that size board

Max. volume of sawdust/day (cu ft) = max. cuts/day amount * volume (cu ft)

Max. weight of sawdust per day (lb) = max volume of sawdust/day (cu ft) * 17 (one cu ft of sawdust weighs 17 pounds) = PTE

Max. weight of sawdust per year = max. weight of sawdust per day (lb) * 365 days/2000 lbs = PTE

PTE in lb/hour = PTE tons/yr*8760/2000



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

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

TO: Jack E Pender
Metl-Span, LLC
1717 McCall Drive
Shelbyville, IN 46176

DATE: July 16, 2012

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

SUBJECT: Final Decision
Notice Only
145-31855-00064

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:
Mark Pierce, Responsible Official
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	DPABST 7/16/2012 Metl-Span, LLC 145-31855-00064 (Final)		Type of Mail: CERTIFICATE OF MAILING ONLY	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		

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											Remarks
1		Jack E Pender Metl-Span, LLC 1717 McCall Drive Shelbyville IN 46176 (Source CAATS) (CONFIRM DELIVERY)									
2		Mark Pierce Corporate Health, Safety & Environ Mgr Metl-Span, LLC 1720 Lakepoint Drive, Suite 10 Lewisville TX 75057 (RO CAATS)									
3		Mr. Hugh Garner 10203 S Degelow Road Milroy IN 46156 (Affected Party)									
4		Shelbyville City Council and Mayors Office 44 West Washington Shelbyville IN 46176 (Local Official)									
5		Shelby County Commissioners 25 West Polk Shelbyville IN 46176 (Local Official)									
6		Shelby County Health Department 1600 E. SR 44B Shelbyville IN 46176 (Health Department)									
7		Margaret Brunk Shelby County Council PO Box 107 Fountaintown In 46130 (Affected Party)									
8		Tami Grubbs Shelby County Council 2961 N 100 W Shelbyville In 46176 (Affected Party)									
9		Glidden Fence Co. 17804 Spring Mill Rd Westfield IN 46074 (Affected Party)									
10		Environmental Field Services, Inc. 40 SR 32 W Westfield IN 46074 (Affected Party)									
11		Jill Butterfield 17903 Spring Mill Rd Westfield IN 46074 (Affected Party)									
12		Steven Newman 17922 Spring Mill Rd Westfield IN 46074 (Affected Party)									
13											
14											
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