



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: January 26, 2007  
RE: Air Side Systems, LLC / 095-23756-00128  
FROM: Nisha Sizemore  
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, Room 1049, 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.dot 03/23/06



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
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January 26, 2007

Jay S. Porter  
Air Side Systems, LLC  
3620 W. 73<sup>rd</sup> St.  
Anderson, IN 46011

Re: Exempt Construction and Operation Status,  
095-23756-00128

Dear Mr. Porter:

The application from Air Side Systems, LLC, received on October 12, 2006, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following engine cooling fan manufacturing source, to be located at 3620 W. 73<sup>rd</sup> St., Anderson, IN 46011, is classified as exempt from air pollution permit requirements:

- (a) One (1) resin prepreg area, where resin is poured into an impregnation tub with a lid and reinforcement fabric is added to the tub allowing resin to saturate the cloth and make a wetted prepreg bundle for use in the presses, with all drips collected in the tub, constructed in 2006, capacity: 188 pounds of material (including 94.08 pounds of resin) per hour.
- (b) Four (4) compression molding presses, identified as Presses 1 through 4, constructed in 2006 and 2007, exhausting to vents 1 through 4, respectively, capacity: 47 pounds of material (including 23.52 pounds of resin) per hour, each.
- (c) Seven (7) natural gas-fired heaters, heat input capacity: 0.2 million British thermal units per hour, each.
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface, including:
  - (1) One (1) CNC lathe for machining aluminum extrusion into a finished product, capacity: 30 pounds of aluminum extrusion per hour.
  - (2) One (1) cutoff saw for cutting aluminum extrusion to rough length before machining, capacity: 25 pounds of aluminum extrusion per hour.
- (e) One (1) assembly area including mechanically attaching molded fan blades to metal fan center disks using fasteners and balancing with weights, including small hole drilling in the fan blade.

- (f) One (1) cloth cutter for cutting dry glass fabric with a rolling knife blade (no particulate), capacity: 100 pounds per hour.

The following condition shall be applicable:

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:

- (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.

This exemption is the first air approval issued to this source.

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.

Sincerely,

Original signed by

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

CAP/MES

cc: File - Madison County  
Madison County Health Department  
Air Compliance - Cynthia Luxford  
Permit Tracking  
Compliance Data Section  
Local Agency - Anderson Office of Air Management

**Indiana Department of Environmental Management  
Office of Air Quality  
and Anderson Office of Air Management**

**Technical Support Document (TSD) for an Exemption**

**Source Background and Description**

<b>Source Name:</b>	<b>Air Side Systems, LLC</b>
<b>Source Location:</b>	<b>3620 W. 73<sup>rd</sup> St., Anderson, IN 46011</b>
<b>County:</b>	<b>Madison</b>
<b>SIC Code:</b>	<b>3089</b>
<b>Exemption No.:</b>	<b>095-23756-00128</b>
<b>Permit Reviewer:</b>	<b>CarrieAnn Paukowitz</b>

The Office of Air Quality (OAQ) has reviewed an application from Air Side Systems, LLC relating to the construction and operation of an engine cooling fan manufacturing source.

**Permitted Emission Units and Pollution Control Equipment**

There are no permitted emission units operating at this source during this review process.

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted emission units operating at this source during this review process. The one (1) resin prepreg area and one (1) of the four (4) compression molding presses (Press 1) have been constructed, but are not operating. The potential to emit of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is exempt from construction permitting requirements.

**New Emission Units and Pollution Control Equipment**

The application includes information relating to the prior approval for the construction and operation of the following new equipment:

- (a) One (1) resin prepreg area, where resin is poured into an impregnation tub with a lid and reinforcement fabric is added to the tub allowing resin to saturate the cloth and make a wetted prepreg bundle for use in the presses, with all drips collected in the tub, constructed in 2006, capacity: 188 pounds of material (including 94.08 pounds of resin) per hour.
- (b) Four (4) compression molding presses, identified as Presses 1 through 4, constructed in 2006 and 2007, exhausting to vents 1 through 4, respectively, capacity: 47 pounds of material (including 23.52 pounds of resin) per hour, each.
- (c) Seven (7) natural gas-fired heaters, heat input capacity: 0.2 million British thermal units per hour, each.
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface, including:
  - (1) One (1) CNC lathe for machining aluminum extrusion into a finished product, capacity: 30 pounds of aluminum extrusion per hour.
  - (2) One (1) cutoff saw for cutting aluminum extrusion to rough length before machining, capacity: 25 pounds of aluminum extrusion per hour.

- (e) One (1) assembly area including mechanically attaching molded fan blades to metal fan center disks using fasteners and balancing with weights, including small hole drilling in the fan blade.
- (f) One (1) cloth cutter for cutting dry glass fabric with a rolling knife blade (no particulate), capacity: 100 pounds per hour.

### Existing Approvals

There are no previous approvals for this source.

### Enforcement Issue

There are no enforcement actions pending. No pre-construction approval was required for the constructed emission units.

### Recommendation

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

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 was received on October 12, 2006. Additional information was received on November 21, December 4, December 11, and December 28, 2006, and January 2, 2007.

### Emission Calculations

See pages 1 through 5 of Appendix A of this document for detailed emission calculations.

### Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	1.18
PM <sub>10</sub>	1.22
SO <sub>2</sub>	0.004
VOC	7.59
CO	0.515
NO <sub>x</sub>	0.613

HAPs	Potential to Emit (tons/yr)
Styrene	7.49
Hexane	0.011
Diethanolamine	0.039
Benzene, Dichlorobenzene, Formaldehyde, Toluene, Lead, Cadmium, Chromium, Manganese & Nickel	< 0.001, each
Total	7.54

- (a) The potential to emit of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (b) The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

**County Attainment Status**

The source is located in Madison County.

Pollutant	Status
PM <sub>10</sub>	attainment
PM <sub>2.5</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
8-hour Ozone	Basic nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) 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 NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Madison County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for emission offset, 326 IAC 2-3.
- (b) Madison County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for

PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions.

- (c) Madison County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	1.18
PM <sub>10</sub>	1.22
SO <sub>2</sub>	0.004
VOC	7.59
CO	0.515
NO <sub>x</sub>	0.613
Single HAP (Styrene)	7.49
Combination HAPs	7.54

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of two hundred-fifty (250) tons per year or greater and it is not in one of the twenty-eight (28) listed source categories, and VOC and NO<sub>x</sub> are not emitted at a rate of one-hundred (100) tons per year or greater. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply, and pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (b) The values in this table are the unrestricted potential emissions because there are no limitations included in the Exemption for this source.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one-hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) the combination of HAPs is less than twenty-five (25) tons per year.

This is the first air approval issued to this source.

## Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) This source is an area source of HAPs. Therefore, the requirements of the National Emission Standards for Hazardous Air Pollutants for Reinforced Plastics Composites Production (40 CFR 63, Subpart WWWW), which is incorporated by reference as 326 IAC 20-56, are not included in the permit for this source.

## State Rule Applicability – Entire Source

### 326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County with the potential to emit greater than twenty-five (25) tons per year of NO<sub>x</sub>, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply.

### 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 the permit:

- (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.

## State Rule Applicability – Individual Facilities

### 326 IAC 2-3 (Emission Offset)

The potential VOC emissions and the potential NO<sub>x</sub> emissions are each less than one-hundred (100) tons per year. Therefore, this source is a minor source pursuant to 326 IAC 2-3, Emission Offset.

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The potential emissions of each attainment criteria pollutant are less than two-hundred fifty (250) tons per year. Therefore, this source, which is not one of the twenty-eight (28) listed source categories, is a minor source pursuant to 326 IAC 2-2, PSD.

#### 326 IAC 2-4.1-1 (New source toxics control)

This source will emit less than ten (10) tons per year of a single HAP and twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The potential emissions from each process at this source are less than 0.551 pounds per hour of PM. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the processes listed in this document are exempt from the requirements of 326 IAC 6-3.

#### 326 IAC 8-1-6 (New facilities; General reduction requirements)

The potential VOC emissions from each facility at this source is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

#### 326 IAC 20-25 (Emissions from Reinforced Plastics Composites Fabricating Emission Units)

This source does not have the potential to emit ten (10) tons per year or more of an individual HAP or twenty-five (25) tons per year or more of any combination of HAPs. Therefore, the requirements of 326 IAC 20-25 are not applicable.

#### 326 IAC 20-56 (Reinforced Plastic Composites Production)

This source is an area source of HAPs. Therefore, the requirements of 326 IAC 20-56 are not applicable.

### Conclusion

The construction and operation of this engine cooling fan manufacturing source shall be subject to the conditions of the **Exemption 095-23756-00128**.

**Appendix A: Emissions Calculations  
Reinforced Plastics and Composites  
Open Molding Operations\***

**Company Name: Air Side Systems, LLC  
Address City IN Zip: 3620 W. 73rd Street, Anderson, IN 46011  
Approval No.: 095-23756-00128  
Reviewer: CarrieAnn Paukowits  
Application Date: October 12, 2006**

Emission Unit ID	Material (Resin or Gel Name)	Density (Lb/Gal)	Weight % Monomer	Amount of Resin (lbs/hr)		Pultrusion Emission Factor (lb/lb of HAP)	Potential VOC/HAP (pounds per day)	Potential VOC/HAP (tons per year)	Transfer Efficiency	P
prepreg	DION 9500	9.58	42.00%	94.08		1.33%	12.61	2.30	100%	

**Total VOC/HAP and PM from Resin Use      2.30**

**METHODOLOGY**

Assume all of the monomer is styrene.

The process is most similar to pultrusion where fiberglass material is pulled thru a resin bath. The emission factor for a resin bath with wet area enclosure & resin drip (of Available HAP) is used because no drips occur outside the tub.

The emission factor is from the ACMA emission factor guidance for fiberglass composites manufacturing & Subpart WWWW.

Potential VOC (lb/day) for resins or gels = Amount of Resin (lbs/hr) \* Weight % Monomer \* Emission Factor (% of available HAP) \* 24 hrs/day

Potential VOC (ton/year) = Potential VOC (lb/day) \* 365 days/year \* (1 ton/2000 lb)

Potential PM (ton/year) = Amount of Resin (lbs/hr) \* (1 - Weight % monomer or VOC) \* (1 - transfer efficiency) \* 24 hrs/day \* 365 days/year \* (1 ton/2000 lb)

**Appendix A: Emissions Calculations  
Reinforced Plastics and Composites  
Closed Molding Fiberglass Processes**

**Company Name: Air Side Systems, LLC  
Address City IN Zip: 3620 W. 73rd Street, Anderson, IN 46011  
Approval No.: 095-23756-00128  
Reviewer: CarrieAnn Paukowits  
Application Date: October 12, 2006**

Material	Production Rate (cavities/hr)	Weight % Styrene Monomer	Resin Usage (lbs/cavity)		Pounds VOC & HAP per hour	Pounds VOC & HAP per day	Tons of VOC & HAPs per Year	PM tons per year	Emission Factor (Flash off)	Transfer Efficiency
DION 9500	16	42.0%	1.47		0.30	7.11	1.30	0.00	3%	100%
DION 9500	16	42.0%	1.47		0.30	7.11	1.30	0.00	3%	100%
DION 9500	16	42.0%	1.47		0.30	7.11	1.30	0.00	3%	100%
DION 9500	16	42.0%	1.47		0.30	7.11	1.30	0.00	3%	100%

**Totals: 1.19 28.45 5.19 0.00**

**METHODOLOGY**

Assume all VOC is Styrene

Potential VOC Pounds per Hour = Production Rate (cavities/hr) x Resin Usage (lbs/cavity) \* Weight % Monomer \* Emission factor

Particulate Potential Tons per Year = (cavities/hour) \* (Resin usage lbs/cavity) \* (1 - Weight % Monomer (Styrene)) \* (1 - Transfer efficiency) \* (8760 hr/yr) \* (1 ton / 2000 lbs)

Emission Factor for Closed Molding NVS is 3%

Emission Factors are from AP42, Fifth Edition (January 1995), Table 4.4-2

**Appendix A: Emissions Calculations  
Natural Gas Combustion**

**Company Name: Air Side Systems, LLC  
Address City IN Zip: 3620 W. 73rd Street, Anderson, IN 46011  
Approval No.: 095-23756-00128  
Reviewer: CarrieAnn Paukowits  
Application Date: October 12, 2006**

Heat Input Capacity  
MMBtu/hr

1.40

Potential Throughput  
MMCF/yr

12.3

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100 **see below	5.50	84.0
Potential Emission in tons/yr	0.012	0.047	0.004	0.613	0.034	0.515

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 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
	0.00210	0.00120	0.07500	1.80000	0.00340
Potential Emission in tons/yr	0.000013	0.000007	0.000460	0.011038	0.000021

Emission Factor in lb/MMcf	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	
	0.0005	0.0011	0.0014	0.0004	0.0021	
Potential Emission in tons/yr	0.000003	0.000007	0.000009	0.000002	0.000013	<b>0.012</b>

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

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 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations  
Coolant Usage**

**Company Name: Air Side Systems, LLC  
Address City IN Zip: 3620 W. 73rd Street, Anderson, IN 46011  
Approval No.: 095-23756-00128  
Reviewer: CarrieAnn Paukowits  
Application Date: October 12, 2006**

Material	Material Usage (gallons/yr)	VOC Content (lbs/gal)		Tons of VOC per Year
Kleenzol (lathe)	104	0.94		0.049
Kleenzol (saw)	26	0.94		0.012
Totals:				<b>0.061</b>

Material	Material Usage (lbs/yr)	Material Density (lbs/gal)	Weight % Diethanolamine	Tons of Diethanolamine per Year
Kleenzol (lathe)	12.5	8.33	5.00	0.031
Kleenzol (saw)	3.12	8.33	5.00	0.008
Totals:				<b>0.039</b>

**Methodology**

Potential VOC Tons/yr = Material Usage Rate (gal/yr) x VOC Content (lbs/gal) x 1 ton/2,000 lbs

Potential HAP (Diethanolamine) Tons/yr = Material Usage Rate (lbs/yr) x Weight % Diethanolamine x 1 ton/2,000 lbs

The fluid may be recirculated 1,000 times per hour for the lathe and 500 times per hour for the saw, but the lathe has only 52 gallons available for use and the cutoff saw has only 13 gallons available for use. Coolant fluid will be replaced annually. The coolant replacement rate has been doubled for safety.

**Drilling**

Number of Holes per Hour	Diameter (m)	Thickness (m)	Volume (cub. m)	Material Density (lbs/gal)	Material Density (lbs/cub. m)	PM/PM10 PTE (lbs/hr)	PM/PM10 PTE (tons/yr)
500	0.0067	0.006	2.12E-07	9.58	2531	0.268	1.17

**Methodology**

Material Density (lbs/cub. mm) = Material Density (lbs/gal) x 1 gal/0.0037854 cub. m

PM/PM10 PTE (lbs/hr) = Material Density (lbs/cub. M) x Hole Volume (cub. M) x Number of Holes per Hour

PM/PM10 PTE (tons/yr) = PM/PM10 PTE (lbs/hr) x 8,760 hrs/yr x 1 ton/2,000 lbs

**Appendix A: Emissions Calculations  
Summary**

**Company Name: Air Side Systems, LLC  
Address City IN Zip: 3620 W. 73rd Street, Anderson, IN 46011  
Approval No.: 095-23756-00128  
Reviewer: CarrieAnn Paukowits  
Application Date: October 12, 2006**

**Unrestricted Potential to Emit**

Process	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
prepreg	0.00	0.00	0.00	0.00	2.30	0.00
Press 1	0.00	0.00	0.00	0.00	1.30	0.00
Press 2	0.00	0.00	0.00	0.00	1.30	0.00
Press 3	0.00	0.00	0.00	0.00	1.30	0.00
Press 4	0.00	0.00	0.00	0.00	1.30	0.00
Natural Gas	0.012	0.047	0.004	0.613	0.034	0.515
Saw and Lathe (Cutting Coolant)	0.000	0.000	0.00	0.00	0.061	0.00
Drilling	1.17	1.17	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1.18</b>	<b>1.22</b>	<b>0.004</b>	<b>0.613</b>	<b>7.59</b>	<b>0.515</b>

Process	Styrene (tons/yr)	Benzene (tons/yr)	Dichlorobenzene (tons/yr)	Formaldehyde (tons/yr)	Hexane (tons/yr)	Toluene (tons/yr)
prepreg	2.30	0.00	0.00	0.00	0.00	0.00
Press 1	1.30	0.00	0.00	0.00	0.00	0.00
Press 2	1.30	0.00	0.00	0.00	0.00	0.00
Press 3	1.30	0.00	0.00	0.00	0.00	0.00
Press 4	1.30	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00001	0.00001	0.0005	0.011	0.00002
Saw and Lathe (Cutting Coolant)	0.00	0.00	0.00	0.00	0.00	0.00
Drilling	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>7.49</b>	<b>0.00001</b>	<b>0.00001</b>	<b>0.0005</b>	<b>0.011</b>	<b>0.00002</b>

Process	Lead (tons/yr)	Cadmium (tons/yr)	Chromium (tons/yr)	Manganese (tons/yr)	Nickel (tons/yr)	Diethanolamine (tons/yr)	Total HAPs (tons/yr)
prepreg	0.00	0.00	0.00	0.00	0.00	0.00	2.302
Press 1	0.00	0.00	0.00	0.00	0.00	0.00	1.30
Press 2	0.00	0.00	0.00	0.00	0.00	0.00	1.30
Press 3	0.00	0.00	0.00	0.00	0.00	0.00	1.30
Press 4	0.00	0.00	0.00	0.00	0.00	0.00	1.30
Natural Gas	0.000003	0.000007	0.000009	0.000002	0.00001	0.00	0.012
Saw and Lathe (Cutting Coolant)	0.00	0.00	0.00	0.00	0.00	0.039	0.039
Drilling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.000003</b>	<b>0.000007</b>	<b>0.000009</b>	<b>0.000002</b>	<b>0.000013</b>	<b>0.039</b>	<b>7.54</b>