



December 8, 2006

Mr. Dan Ooley
Operations Manager
Elliot Williams Company, LLC
3500 East 20th Street
Indianapolis, Indiana 46218

CERTIFIED MAIL 7000 0600 0023 5186 2699

Dear Mr. Ooley:

Re: Exempt Construction and Operation Status,
097-23913-00398

The application from Elliot Williams Company, LLC received on November 17, 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 plastic foam products, refrigeration equipment and structural metal products fabrication operations, located at 3500 East 20th Street, Indianapolis, Indiana, 46218 is classified as exempt from air pollution permit requirements:

The source consists of the following exempt emission units and pollution control devices:

- (a) One (1) Graco Glue system identified as EU 1. Techno Adhesive #199 glue is applied through the use of air atomization spray guns with a maximum process capacity of 0.0038 gallons of glue per unit and 50 units per hour. Installed in 2001.
- (b) Miscellaneous solvent cleaning usage identified as EU 2 with a maximum spot cleaning solvent usage of 1.8 pounds per hour. Installed in 2001.
- (c) Natural gas fired space heaters with a combined maximum total heat input capacity of 2.0 million Btu per hour. Installed in 2001.
- (d) Structural steel fabrication activities using less than ten (10) tons of welding consumables per year. Installed in 2001.
- (e) Hand held grinding equipment. Installed in 2001.
- (f) Closed-cell rigid polyurethane foam board manufacturing process utilizing HFC 245fa as the blowing agent. Maximum foam blowing agent usage of 3.5 tons per year. Installed in 2001.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:
 - (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw

- (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.
- (2) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), this 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 (Fugitive Dust Emissions).

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

An application or notification shall be submitted in accordance with 326 IAC 2 to the IDEM, Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

ORIGINAL SIGNED BY

Felicia A. Robinson
Administrator

MBC

cc: Files
Air Compliance – Matt Mosier
Marion County Health Department
IDEM, OAQ – Mindy Hahn

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

and

Indianapolis Office of Environmental Services

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Elliot Williams Company, LLC
Source Location:	3500 East 20th Street, Indianapolis, Indiana 46218
County:	Marion
SIC Code:	3086, 3444, and 3585
Exemption No.:	097-23913-00398
Permit Reviewer:	M. Caraher

The Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) have reviewed an Exemption application from Elliot Williams Company, LLC relating to a plastic foam products, refrigeration equipment and structural metal products fabrication operation.

Exempt Emission Units and Pollution Control Equipment

The source consists of the following exempt emission units and pollution control devices:

- (a) One (1) Graco Glue system identified as EU 1. Techno Adhesive #199 glue is applied through the use of air atomization spray guns with a maximum process capacity of 0.0038 gallons of glue per unit and 50 units per hour. Installed in 2001.
- (b) Miscellaneous solvent cleaning usage identified as EU 2 with a maximum spot cleaning solvent usage of 1.8 pounds per hour. Installed in 2001.
- (c) Natural gas fired space heaters with a combined maximum total heat input capacity of 2.0 million Btu per hour. Installed in 2001.
- (d) Structural steel fabrication activities using less than ten (10) tons of welding consumables per year. Installed in 2001.
- (e) Hand held grinding equipment. Installed in 2001.
- (f) Closed-cell rigid polyurethane foam board manufacturing process utilizing HFC 245fa as the blowing agent. Maximum foam blowing agent usage of 3.5 tons per year. Installed in 2001.

Existing Approvals

The source has been operating under the following previous approvals:

- (a) Exemption 097-14636-00398, issued on February 7, 2002.

All conditions from previous approvals were incorporated into this Exemption except Condition (2) which stated, "Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart E and 326

IAC 22 (Protection of Stratospheric Ozone), the Permittee shall comply with the standards for labeling of containers of controlled substances or products containing controlled substances.

Reason not incorporated: 40 CFR 82 (Protection of Stratospheric Ozone) requirements were included in the first air approval for this source, Exemption 097-14636-00398, issued on February 7, 2002, because the source was using HCFC 141B, a Class I or Class II controlled substance in the polyurethane foam board manufacturing process. In the Exemption application of November 17, 2006, Elliot Williams Company, LLC stated that HCFC 141B foam blowing agent is now replaced with foam blowing agent HFC 245fa, which is not listed as a Class I or Class II controlled substance under 40 CFR 82 (Protection of Stratospheric Ozone). Therefore, CFR 82 (Protection of Stratospheric Ozone) requirements are not included for this source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
NA	NA	NA	NA	NA	NA

Justification for the Exemption

Each of the existing emission units and pollution control equipment at this existing source were issued Exemption 097-14636-00398, on February 7, 2002. The changes to this source for this review involve chemical or production changes to existing exempt emission units that have resulted in a change in the potential to emit regulated air pollutants. With the revision to chemical and production changes at this existing source, this source is still exempt from the requirement to obtain a permit under 326 IAC 2 (Permit Review Rules) because the potential to emit regulated air pollutants is still less than the emission thresholds identified in 326 IAC 2-1.1-3(e)(1) (Exemptions). Therefore, an Exemption, 097-23913-00398, will be issued.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the Exemption 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 submitted by the applicant on November 17, 2006. Additional information was received on December 7, 2006 in regard to 40 CFR 82 nonapplicability.

There was no notice of completeness letter mailed to the Permittee.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (see Appendix A pages 1 through 7).

Potential to Emit of the Source Before and after the Modification to Existing Emission Units

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.”

	Existing Emission Unit Emissions	Source Wide Emissions After Modification of Existing Emission Units	Potential to Emit of the Modification	PSD/Emission Offset Major Modification Threshold
Pollutant	Potential to Emit (tons/year)	Potential to Emit (tons/year)	Potential to Emit (tons/year)	Potential to Emit (tons/year)
PM	4.70	1.61	- 3.09	250
PM10	4.70	1.61	- 3.09	250
SO ₂	0.00	0.01	0.01	250
VOC	8.00	8.33	0.33	100
CO	0.70	0.74	0.04	250
NO _x	0.90	0.88	- 0.02	100
Highest Single HAP	7.00	7.29 (Methylene Chloride)	0.29 (Methylene Chloride)	NA
Combination HAP	8.60	9.37	0.77	NA

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of regulated air pollutants are equal to or less than the emission levels listed in 326 IAC 2-1.1-3(d)(1) (Exemptions). An Exemption will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of any combination of HAPs is equal to or less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7. An Exemption will be issued.
- (c) This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (d) This modification to an existing minor stationary source is not major because the emissions increase is less than the Emission Offset major source thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (e) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM2.5	nonattainment
PM10	attainment
SO ₂	maintenance attainment
NO ₂	attainment
8-hour Ozone	basic nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment of the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (c) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, PM10, SO₂, Lead and CO emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration, 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 revoking the one-hour ozone standard in Indiana.

Part 70 Permit Conditions

This existing source, including the emissions from this Exemption, 097-23913-00398, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20, 40 CFR 61 or 40 CFR Part 63) included for this source.
- (c) There are no 40 CFR 82 (Protection of Stratospheric Ozone) requirements included for this source. 40 CFR 82 (Protection of Stratospheric Ozone) requirements were included in the first air approval for this source, Exemption 097-14636-00398, issued on February

7, 2002, because the source was using HCFC 141B, a Class I or Class II controlled substance in the polyurethane foam board manufacturing process. In the Exemption application of November 17, 2006, Elliot Williams Company, LLC stated that HCFC 141B foam blowing agent is now replaced with foam blowing agent HFC 245fa, which is not listed as a Class I or Class II controlled substance under 40 CFR 82 (Protection of Stratospheric Ozone). Therefore, CFR 82 (Protection of Stratospheric Ozone) requirements are not included for this source.

State Rule Applicability – Entire Source

326 IAC 1-7 (Stack Height Provisions)

This source does not have potential or actual PM or SO₂ emissions greater than twenty (25) tons per year. Therefore, the source is not subject to 326 IAC 1-7 (Stack Height Provisions).

326 IAC 2-1.1-5 (Air Quality Requirements)

Marion County has been designated as nonattainment for PM_{2.5}. According to an EPA guidance memo dated April 5, 2005, PM-10 is to be utilized as a surrogate for PM_{2.5} until the EPA can promulgate the PM_{2.5} implementation rule. PM₁₀ emissions, and therefore PM_{2.5} emissions, from this source are less than one hundred (100) tons per twelve consecutive month period. There have been no modifications to this source such that it is a major source of PM₁₀ emissions. Therefore, this source is not subject to nonattainment new source review requirements for PM_{2.5} emissions.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset)

This existing source is not a major stationary source because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and no attainment or nonattainment regulated pollutant emissions are equal to or greater than one hundred (100) tons per year. There have been no modifications or revisions to this source that were major modifications pursuant to 326 IAC 2-2 or 326 IAC 2-3. Therefore, 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset) are each not applicable to the source.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This existing source commenced operation after July 27, 1997. However, this source does not have the potential to emit any individual single hazardous air pollutant (HAP) equal to or greater than ten (10) tons per year nor does this source have the potential to emit HAP of equal to or greater than twenty-five (25) tons per year for any combination of HAP. This source did not undergo construction or reconstruction of a major HAP source after July 27, 1997. Therefore, this source is not subject to 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants).

326 IAC 2-6 (Emission Reporting)

This source is located in Marion County and does not have the potential to emit of any individual single hazardous air pollutant (HAP) equal to or greater than ten (10) tons per year nor does this source have the potential to emit HAP of equal to or greater than twenty-five (25) tons per year for any combination of HAP. This source does not have the potential to emit of any criteria pollutant equal to or greater than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply to the source.

326 IAC 4-2 (Incinerators)

This source does not have an incinerator. Therefore, this source is not subject to 326 IAC 4-2 (Incinerators).

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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County)

This source has the potential to emit particulate of less than one hundred (100) tons per year and has actual emissions less than ten (10) tons per year. Elliot Williams Company, LLS is not specifically identified in 326 IAC 6.5-6 (Marion County). Therefore, 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County) does not apply to this source.

326 IAC 6-2-4 (Particulate Emission Limitations for Facilities Specified in 326 IAC 6-2-1(d))

This source has no indirect heating emission units because no emission unit at this source produces usable heat that is to be transferred through a heat conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion. Therefore, 326 IAC 6-2-4 (Particulate Emission Limitations for Facilities Specified in 326 IAC 6-2-1(d)) does not apply to this source.

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

Pursuant to the provisions of 326 IAC 6-3-1(b) (Particulate Emission Limitations for Manufacturing Processes), welding operations consuming less than 625 pounds of rod or wire per day, and manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes). Therefore, 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) does not apply to this source.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to the provisions of 326 IAC 6-4 for fugitive dust emissions. The Permittee 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).

326 IAC 6-5 (Fugitive Particulate Matter Emissions)

This source does not have the potential to emit fugitive particulate matter equal to or greater than twenty five (25) tons per year. Therefore, this source is not subject to 326 IAC 6-5 (Fugitive Particulate Matter Emissions).

326 IAC 7 (Sulfur Dioxide Rules)

Neither the source or any specific emission unit at this source has the potential to emit twenty five (25) tons per year or ten (10) pounds per hour of sulfur dioxide (SO₂). Therefore, this source is not subject to 326 IAC 326 IAC 7 (Sulfur Dioxide Rules).

326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations)

Neither the source or any specific emission unit at this source is specifically identified in 326 IAC 7-4-2. Therefore, 326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations) does not apply to this source.

326 IAC 8 (Volatile Organic Compound Rules)

There are no provisions under 326 IAC 8 (Volatile Organic Compound Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 8 (Volatile Organic Compound Rules).

326 IAC 9 (Carbon Monoxide Emission Rules)

There are no provisions under 326 IAC 9 (Carbon Monoxide Emission Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 9 (Carbon Monoxide Emission Rules).

326 IAC 10 (Nitrogen Oxide Rules)

There are no provisions under 326 IAC 10 (Nitrogen Oxide Rules) applicable to any specific emission unit or operation at this source. This source has not opted in to 326 IAC 10 (Nitrogen Oxide Rules). Therefore, this source is not subject to 326 IAC 10 (Nitrogen Oxide Rules).

326 IAC 11 (Emission Limitations for Specific Types of Operations)

This operation manufacturing plastic foam products, refrigeration equipment and the fabrication of structural metal products does not perform any specific type of operation identified in 326 IAC 11 (Emission Limitations for Specific Types of Operations). Therefore, this source is not subject to 326 IAC 11 (Emission Limitations for Specific Types of Operations).

326 IAC 12 (New Source Performance Standards)

See discussion under Federal Rule Applicability of this Technical Support Document.

326 IAC 14 (Emission Standards for Hazardous Air Pollutants)

See discussion under Federal Rule Applicability of this Technical Support Document.

326 IAC 15 (Lead Rules)

Elliot Williams Company, LLC is not specifically identified in 326 IAC 15 (Lead Rules) and there are no provisions under 326 IAC 15 (Lead Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 15 (Lead Rules).

326 IAC 17 (Public Records; Confidential Information; Confidentiality Agreements)

This source has not filed or claimed any application, source or permit information as confidential, pursuant to 326 IAC 17-1-6 (Public Records: Confidentiality Claims), for this review and Exemption issuance, 097-23913-00398.

326 IAC 20 (Hazardous Air Pollutants)

This source is not a major source of hazardous air pollutants (HAP) and does not perform operations specifically identified in 326 IAC 20. See discussion under Federal Rule Applicability of this Technical Support Document.

326 IAC 21 (Acid Deposition Control)

Elliot Williams Company, LLC is not subject to the Acid Rain Program Provisions of Title IV of the 1990 Clean Air Act Amendments as listed in 40 CFR Part 72 through 78 and is, therefore, not subject to 326 IAC 21 (Acid Deposition Control).

326 IAC 22 (Stratospheric Ozone Protection)

See discussion under Federal Rule Applicability of this Technical Support Document.

Conclusion

This fabricated metal products operation, except machinery and transportation equipment, shall be subject to the conditions of Exemption **097-23913-00398**.

**Appendix A: Emissions Calculations
Emissions Summary in Tons per Year**

**Company Name: Elliot Williams, LLC
Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
Permit Number: 097-23913-00398
Plt ID: 097-00398
Reviewer: M. Caraher
Date: 12/4/2006**

	PM	PM10	SO2	NOx	VOC	CO	Highest Single HAP	Combined HAP
Graco Glue System	0.97	0.97	0.00	0.00	0.00	0.00	7.29	7.29
Spot Solvent Use	0.00	0.00	0.00	0.00	8.28	0.00	1.25	2.06
Welding	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.07	0.07	0.01	0.88	0.05	0.74	0.02	0.02
Foam Blowing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.61	1.61	0.01	0.88	8.33	0.74	7.29	9.37

Highest Single HAP = Methylene Chloride

Appendix A: Emissions Calculations
HAPs and Particulate
From Surface Coating Operations

Company Name: Elliot Williams, LLC
 Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
 Exemption No.: 097-23913-00398
 Plt ID: 097-00398
 Reviewer: M. Caraher
 Date: 12/4/2006

Material	Density (Lb/Gal)	Weight % HAP (H2O& HAP)	Weight % Water	Weight % HAP	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds HAP per gallon of coating less water	Pounds HAP per gallon of coating	Potential HAP pounds per hour	Potential HAP pounds per day	Potential HAP tons per year	Particulate Potential ton/yr	lb HAP /gal solids	Transfer Efficiency
Techno Adhesive #199	11.1	79.00%	0.0%	79.0%	0.0%	28.60%	0.00380	50.00	8.76	8.76	1.66	39.95	7.29	0.97	30.63	50%

METHODOLOGY

Pounds of HAP per Gallon Coating less Water = (Density (lb/gal) * Weight % HAP) / (1-Volume % water)
 Pounds of HAP per Gallon Coating = (Density (lb/gal) * Weight % HAP)
 Potential HAP Pounds per Hour = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
 Potential HAP Pounds per Day = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
 Potential HAP Tons per Year = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
 Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
 Pounds HAP per Gallon of Solids = (Density (lbs/gal) * Weight % HAP) / (Volume % solids)

HAP = Methylene Chloride
 Transfer Efficiency = 50% per AP-40 Chapter 10 Table 1 for Air Atomization spray painting

Emission Unit ID EU 2
Spot Solvent Use

Appendix A: Emissions Calculations
VOC and HAPs from Solvent Use

Company Name: Elliot Williams, LLC
 Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
 Exemption No.: 097-23913-00398
 PIt ID: 097-00398
 Reviewer: M. Caraher
 Date: 12/4/2006

	max gallons per year	density (lbs/gal)	VOC content	VOC emissions (tons/yr)	HAP content	HAP emissions (tons/yr)	Xylene content	Xylene emissions (tons/yr)	Toluene content	Toluene emissions (tons/yr)	Ethylbenzene content	Ethylbenzene emissions (tons/yr)	Dimethyl Phthalate content	Dimethyl Phthalate emissions (tons/yr)	di(2-ethylhexyl phthalate content	di(2-ethylhexyl phthalate emissions (tons/yr)
Neutra Flush 1	1200	7.18	92.0%	3.96	0.0%	0.00										
VM & P Naptha	850	6.33	99.0%	2.66	15.0%	0.40	8.0%	0.22	4.0%	0.11	3.0%	0.08				
Dimethylformamide - 2175	250	9.96	100.0%	1.25	100.0%	1.25							100.0%	1.25		
Diocetyl phthalate - 2172	100	8.22	100.0%	0.41	100.0%	0.41									100.0%	0.41
Total Emissions				8.28		2.06		0.22		0.11		0.08		1.25		0.41

Methodology

Emissions = max gallons used per year (gal/yr) x density (lbs/gal) x VOC or HAP content (lbs/lb solvent) / 2000 lbs/ton

max
tons per year of welding
consumables:
10

Appendix A: Emissions Calculations
Welding Emissions

Company Name: Elliot Williams, LLC
Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
Exemption No.: 097-23913-00398
Plt ID: 097-00398
Reviewer: M. Caraher
Date: 12/4/2006

Welding	Emission Factor (lbs/1000 lbs)		PTE	
	Emission Factor (lbs/1000 lbs)		Emissions (tons/yr)	
	PM	PM10	PM	PM10
Flux Cored Arc Welding using Argon (using 10 tons or less of welding consumables)	57	57	0.57	0.57

Methodology

Emissions = emission factor (lbs/1000 lbs) x 2000 lbs/ton x welding consumables (tons/yr) x ton/2000 lbs

Emission factor from AP-42 Table 12.19-1 for FCAW, worst case, 57 lbs PM10/1000 lbs of welding consumables

Assume PM = PM10

Space Heating

Appendix A: Emissions Calculations

Natural Gas Combustion Only

Space Heating

MMBtu/hr 0.3 < 10.0

Company Name: Elliot Williams, LLC
Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
Permit Number: 097-23913-00398
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Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

2.0

17.5

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.3	84.0
Potential Emission in tons/yr	0.07	0.07	0.01	0.88	0.05	0.74

*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 = 17, Low NOx Burners/Flue gas recirculatic

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 N

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 (SUPPLEMENT D 3/98)

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

Appendix A: Emissions Calculations

Natural Gas Combustion Only

Space Heating

MMBtu/hr 0.3 < 10.0

HAPs Emissions

Company Name: Elliot Williams, LLC

Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218

Permit Number: 097-23913-00398

Plt ID: 097-00398

Reviewer: M. Caraher

Date: 12/4/2006

HAPs - Organics						Combined HAP
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.840E-05	1.051E-05	6.570E-04	1.577E-02	2.978E-05	1.648E-02
HAPs - Metals						Combined HAP
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	4.380E-06	9.636E-06	1.226E-05	3.329E-06	1.840E-05	4.800E-05
						1.653E-02

Methodology is the same as page 1.

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
Foam Blowing**

**Company Name: Elliot Williams, LLC
Address City IN Zip: 3500 East 20th Street, Indianapolis, IN 46218
Permit Number: 097-23913-00398
Plt ID: 097-00398
Reviewer: M. Caraher
Date: 12/7/2006**

Material	Density (Lb/Gal)	Weight % VOC (H2O& HAP)	Weight % Water	Weight % HAP	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (ton/unit)	Maximum (units/yr)	Pounds VOC per gallon of coating less water	Potential HAP tons per year	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency
HFC 245fa	10.7	0.00%	0.0%	0.0%	0.0%	100.00%	1.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%

METHODOLOGY

Pounds of HAP per Gallon Coating less Water = (Density (lb/gal) * Weight % HAP) / (1-Volume % water)

Pounds of HAP per Gallon Coating = (Density (lb/gal) * Weight % HAP)

Potential HAP Pounds per Hour = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (ton/unit) * Maximum (units/hr)

Potential HAP Pounds per Day = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential HAP Tons per Year = Pounds of HAP per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds HAP per Gallon of Solids = (Density (lbs/gal) * Weight % HAP) / (Volume % solids)