City of Indianapolis
DPW
Department of Public Works
Bart Peterson, Mayor

TO: Interested Parties / Applicant

RE: Hangar LLC / E097-23339-00591

FROM: Felicia A. Robinson
Administrator
City of Indianapolis
Office of Environmental Services

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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures

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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

City of Indianapolis
DPW
Department of Public Works
Bart Peterson, Mayor

July 5, 2007

Mr. Mark DeMasie
Hangar LLC
7739 Crosswind Drive
Indianapolis, IN 46241

CERTIFIED MAIL 7005 0390 0000 6271 7247

Re: Exempt Construction and Operation Status
Hangar LLC - Indianapolis
E097-23339-00591

Dear Mr. DeMasie:

The application from the Hangar LLC, received on June 30, 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 small aircraft leasing and charter operation, to be located at 7739 Crosswind Drive, Indianapolis, Indiana, 4641, is classified as exempt from air pollution permit requirements:

(a) engine maintenance, touch up painting, metal fabrication, and paint removal;
(b) two (2) small bead blasting cabinets for preparing small parts for painting, with built-in dust collectors, exhausting inside the building;
(c) one (1) paint booth inside the hangar for occasional metal parts painting, using fabric filters for particulate control, using less than 5.5 gallons of paint per year;
(d) aircraft refueling at an outdoor refueling station, with maximum jet fuel annual throughput of 192,000 gallons;
(e) one (1) underground horizontal storage tank (UST), with capacity of 12,000 gallons, storing jet fuel;
(f) one (1) cold solvent degreaser, containing Safety Kleen Solvent, with maximum annual throughput of 10 gallons;
(g) space heaters burning natural gas, with combined maximum heat input capacity of 0.274 MMBtu/hr;
(h) trivial activities under 326 IAC 2-1.1-3(e).

The following conditions shall be applicable:

(a) 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:

(1) 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.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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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

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 IDEM, Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) 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

BG
cc: Files
Air Compliance – Matt Mosier
IDEM, OAQ – Mindy Hahn
Indiana Health Department

Indiana Department of Environmental Management
Office of Air Quality
and
City Of Indianapolis Office of Environmental Services

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Hangar LLC
Source Location:	7739 Crosswind Drive, Indianapolis, Indiana, 46241
County:	Marion
SIC Code:	7359
Exemption No.:	E097-23339-00591
Permit Reviewer:	Boris Gorlin

The Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES) have reviewed an application from the Hangar LLC relating to the aircraft and equipment rental and leasing operation.

Exempt Emission Units and Pollution Control Equipment

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

Hangar LLC is a small aircraft leasing and charter company operating out of the Indianapolis International Airport. It operates a hangar and offices. The source consists of the following operations and emission units:

(a) engine maintenance, touch up painting, metal fabrication, and paint removal;
(b) two (2) small bead blasting cabinets for preparing small parts for painting, with built-in dust collectors, exhausting inside the building;
(c) one (1) paint booth inside the hangar for occasional metal parts painting, using fabric filters for particulate control, using less than 5.5 gallons of paint per year;
(d) aircraft refueling at an outdoor refueling station, with maximum jet fuel annual throughput of 192,000 gallons;
(e) one (1) underground horizontal storage tank (UST), with capacity of 12,000 gallons, storing jet fuel;
(f) one (1) cold solvent degreaser, containing Safety Kleen Solvent, with maximum annual throughput of 10 gallons;
(g) space heaters burning natural gas, with combined maximum heat input capacity of 0.274 MMBtu/hr;
(h) trivial activities under 326 IAC 2-1.1-3(e).

Existing Approvals

The source has no existing approvals.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification that the two (2) small bead blasting cabinets dust collectors be considered an integral part of the blasting cabinet:

The process cannot operate without the control equipment, which provides the airflow for the unit. Therefore, the permitting level and rule applicability will be determined using the potential to emit after the dust collectors.

Enforcement Issues

There are no enforcement actions pending. Pursuant to 326 IAC 2-1.1-3(e)(1), this source is exempt from permitting requirements.

Recommendation

The staff recommends to the Administrator that an exemption from air pollution permitting requirements be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the source's application received on June 30, 2006.

Emission Calculations

See TSD Appendix A (five pages) for 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, inclulding 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	1.717
PM10	1.724
SO_2	0.0072
VOC	1.181
CO	0.1008
NO_x	0.1200

HAPs	Potential to Emit (tons/yr)
Highest single HAP	0.0056 (Hexane/Naphtalene)
Combination of HAPs	0.0155

The potential to emit (as defined in 326 IAC 2-7-1(29)) of each criteria air pollutant is less than the levels listed in 326 IAC 2-1.1-3(d)(1), 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. Pursuant to 326 IAC 2-1.1-3, an exemption will be issued.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM10	Unclassifiable
PM2.5	Nonattainment
SO_2	Maintenance attainment
NO_X	Attainment
8-hour Ozone	Basic nonattainment
CO	Attainment
Lead	unclassifiable

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability - Entire Source section.

(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 surrogate for PM2.5 emissions, pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability - Entire Source section.

(c) Marion County has been classified as attainment or unclassifiable in Indiana for PM10, SO_2, NO_2, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.

(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.

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	Potential to Emit (tons/yr)
PM	1.717
PM10	1.724
SO_2	0.0072
VOC	1.181
CO	0.1008
NO_x	0.1200

HAPs	Potential to Emit (tons/yr)
Highest single HAP	0.0056 (Hexane/Naphtalene)
Combination of HAPs	0.0155

(a) This new source is **not** a major stationary source under 326 IAC 2-2 or 326 IAC 2-3 because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

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 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 is the first air approval issued to this source.

Federal Rule Applicability

40 CFR 60.110b, Subpart Kb (VOL Storage Vessels)

Requirements of this New Source Performance Standard (NSPS) are not included for this source because it does not have storage vessels with maximum storage capacity greater than 75 cubic meters. The one (1) jet fuel storage tank has maximum capacity of 12,000 gallons (45.4 cubic meters).

There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this source.

40 CFR 63, Subpart T (Halogenated Solvent Cleaning)

Requirements of this National Emission Standard for HAPs are not included for this source because no solvents containing any of the components listed in 40 CFR 63.460(a) are used at this source.

No other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Parts 61 and 63) are included for this source.

State Rule Applicability - Entire Source

326 IAC 2-1.1-3 (Exemptions)

This source has the potential to emit (PTE) less than ten (10) tons per year (tpy) of a single hazardous air pollutant (HAP) and twenty five (25) tpy of any combination of HAPs. All other regulated pollutants are below the regulatory thresholds stated in 326 IAC 2-1.1-3(e)(1). Therefore, this source is not required to apply for and obtain a registration or permit for construction and operation.

326 IAC 2-1.1-5 (Non-attainment New Source Review)

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM-10 (as surrogate for PM2.5). Therefore, the Non-attainment New Source Review requirements are not applicable.

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

This source is not major because the emissions are less than the PSD major source levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

326 IAC 2-3 (Emission Offset)

This source is not major because the emissions are less than the Emission Offset major source levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants - New source toxics control)

This source is not a major source of HAPs, and 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 2-5.1-1 (Construction of New Sources - Exemptions)

This is a new source that meets the criteria under 326 IAC 2-1.1-3, and therefore is exempt under this rule.

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of thirty percent (30%) 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 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4, the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate this regulation.

326 IAC 6-5.1-1 (Particulate Matter Limitations except Lake County)
Although the source is located in Marion County, it does not have the potential to emit 100 tons per year or greater of particulate matter; and/or actual emissions of 10 tons or more per year of particulate matter. In addition, the source has combustion units that burn only natural gas, and is not one of the sources listed in 326 IAC 6.5-6 (formerly 326 IAC 6-1-12), therefore 326 IAC 6.5-1-1 (formerly 6-1), does not apply.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
This source does not include petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi); therefore, this rule is not applicable.

326 IAC 8-4-4 (Bulk gasoline terminals)
According to 326 IAC 1-2-8 (Definitions), this source is not a Bulk Gasoline Terminal because it does not receive gasoline from refineries primarily by pipeline, ship, barge or rail, and does not deliver gasoline to bulk gasoline plants or to commercial or retail accounts primarily by transport. Therefore, 326 IAC 8-4-4 is not applicable.

326 IAC 12 (New Source Performance Standards)
No New Source Performance Standards (40 CFR 60) are included for this source; therefore, it is not subject to this rule.

326 IAC 14 (Emission Standards For Hazardous Air Pollutants)
326 IAC 20 (Hazardous Air Pollutants)
No National Emission Standards for Hazardous Air Pollutants (NESHAP) are included for this source; therefore, it is not subject to 326 IAC 14 and 326 IAC 20.

State Rule Applicability - Individual Facilities

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
This source does not include manufacturing processes; therefore, 326 IAC 6-3 does not apply to this source and its emission units.

326 IAC 8-2-1 (Surface Coating Emission Limitations)
326 IAC 8-2-9 (Miscellaneous Coating Operations)
Pursuant to 326 IAC 8-2-1(a)(3), the one (1) paint booth is not subject to requirements of 326 IAC 8-2-9 because its actual VOC emission before add-on control is less than fifteen (15) pounds per day (see TSD Appendix A, page 3 of 5).

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
This source does not include petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi); therefore, this rule is not applicable.

326 IAC 8-4-4 (Bulk gasoline terminals)

According to 326 IAC 1-2-8 (Definitions), this source is not a Bulk Gasoline Terminal because it does not receive gasoline from refineries primarily by pipeline, ship, barge or rail, and does not deliver gasoline to bulk gasoline plants or to commercial or retail accounts primarily by transport. Therefore, 326 IAC 8-4-4 is not applicable.

326 IAC 8 (VOC Rules)

No other emission units at this source are subject to this rule.

Conclusion

The construction and operation of this small aircraft leasing and charter source shall be subject to the conditions of this Exemption No.: 097-23339-00591.

Company Name: Hangar LLC
Address City IN Zip: 7739 Crosswind Drive, Indianapolis, Indiana, 46241
Permit Number: E097-23339-00591
Plt ID: 097-00591
Reviewer: Boris Gorlin

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	**0.010**	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
All oxides	160
Sand	**99**
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter, in	30	40	50	**60**	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	**195**	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)

FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	195
D = Density of abrasive (lb/ft3) From Table 2 =	99
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.25
ID1 = Nozzle internal diameter (in) from Table 3 =	0.25

Flow Rate (FR) (lb/hr) = **195.0** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010	
FR = Flow Rate (lb/hr) =	195.000	
w = fraction of time of wet blasting =	0	%
N = number of nozzles =	1	

Uncontrolled PM Emissions =	**1.95**	**lb/hr**
	8.54	**ton/yr**
	90%	**Efficiency**
	1.71	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)

Company Name: Hangar LLC Space Heaters
Address City IN Zip: 7739 Crosswind Drive, Indianapolis, Indiana, 46241
Permit Number: E097-23339-00591
Plt ID: 097-00591
Reviewer: Boris Gorlin

Natural Gas Space Heaters

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.2740	2.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0023	0.0091	0.00072	0.12	0.0066	0.10

*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

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

	HAPs - Organics					
	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	Total:
Potential Emission in tons/yr	2.520E-06	1.440E-06	9.000E-05	2.160E-03	4.080E-06	2.258E-03

	HAPs - Metals					
	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	6.000E-07	1.320E-06	1.680E-06	4.560E-07	2.520E-06	Total Metal 6.576E-06
						Total HAP 0.0023

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.

Company Name: Hangar LLC
Address City IN Zip: 7739 Crosswind Drive, Indianapolis, Indiana, 46241
Permit Number: E097-23339-00591
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Material	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Gallons of Material (gal/year)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per day	Potential VOC (tons/year)	Particulate Potential (ton/year)	Transfer Efficiency %
Jet Glo Paint Thinner	7.83	88%	0%	88%	0%	1.00	6.89	6.89	0.019	0.0034	0.00047	0%
US Paint Corp AWL Cat#2	7.04	100%	0%	100%	0%	0.50	7.04	7.04	0.010	0.0018	0	0%
Jet Glo Epoxy Primer	7.83	100%	0%	100%	0%	0.25	7.83	7.83	0.0054	0.00098	0	0%
Pratt and Lambert Acryglo Paint	7.04	100%	0%	100%	0%	0.25	7.04	7.04	0.0048	0.00088	0	0%
Jet Glo Lacquer Paint	7.04	100%	0%	100%	0%	0.75	7.04	7.04	0.014	0.0026	0	0%
PPG Industries Reducer	12.31	49%	0%	49%	0%	0.25	6.03	6.03	0.0041	0.00075	0.00078	0%
Sterling Lacquer	12.36	50%	0%	50%	0%	0.25	6.18	6.18	0.0042	0.00077	0.00077	0%
US Paint G8003-04 Paint	7.04	100%	0%	100%	0%	0.25	7.04	7.04	0.0048	0.00088	0	0%
Sherwin Williams Acryglo Polyurethane	10.95	52%	0%	52%	0%	2.00	5.69	5.69	0.031	0.0057	0.0053	0%
									Totals	0.0178	0.0073	

Pounds of VOC per Gallon Coating less Water = ((Density (lb/gal))*Weight % of Organics)/(1-Volume % of Water)
Pounds of VOC Per Gallon Coating = Density (lb/gal)*Weight % Organics
Potential VOC Pounds Per Day = Pounds of VOC per Gallon coating (lb/gal)*Gal of Material (gal/year)/365 (days/year)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal)*Gal of Material (gal/year)*(1 ton/2000 lb)
Particulate Potential Tons per Year = Gal of Material (gal/year)*Density (lbs/gal)*(1-Weight % Volatiles)*(1-Transfer efficiency)*(1 ton/2000 lbs)

Material	Density	Gallons of Material	Weight %	Weight %	Weight %	Weight %	Weight %	Weight %	Xylene Emissions	Toluene Emissions	Methyl Isobutyl Ketone	Methyl Ethyl Ketone	Ethyl Benzene	Chromium Compounds	
	(lb/gal)	(gal/year)	Xylene	Toluene	Methyl Isobutyl Ketone	Methyl Ethyl Ketone	Ethyl Benzene	Chromium Compounds	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	(ton/year)	
Jet Glo Paint Thinner	7.83	1.00	0.00%	12.00%	17.00%	0.00%	0.00%	10.00%	0.000000	0.00047	0.00067	0.000000	0.000000	0.00039	
US Paint Corp AWL Cat#2	7.04	0.50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
Jet Glo Epoxy Primer	7.83	0.25	0.00%	8.00%	0.00%	0.00%	0.00%	0.00%	0.000000	0.000078	0.000000	0.000000	0.000000	0.000000	
Pratt and Lambert Acryglo Paint	7.04	0.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
Jet Glo Lacquer Paint	7.04	0.75	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
PPG Industries Reducer	12.31	0.25	3.00%	0.00%	0.00%	3.00%	0.00%	0.00%	0.000046	0.000000	0.000000	0.000046	0.000000	0.000000	
Sterling Lacquer	12.36	0.25	3.00%	0.00%	0.00%	3.00%	0.40%	0.00%	0.000046	0.000000	0.000000	0.000046	0.000006	0.000000	
US Paint G8003-04 Paint	7.04	0.25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
Sherwin Williams Acryglo Polyurethane	10.95	2.00	0.00%	0.00%	1.00%	0.00%	0.20%	0.00%	0.000000	0.000000	0.00011	0.000000	0.000022	0.000000	**Total HAPs:**
								Totals:	0.000093	0.00055	0.00078	0.000093	0.000028	0.00039	0.0019

Methodology:
HAPs emission rate (tons/yr)=Density (lb/gal)*Gal of Material (gal/year)*Weight% HAP*1 ton/2000 lbs

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Permit Number: E097-23339-00591
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Fueling Station

	Variables	Amount	Units
Amount Fueled Per Year	192,000		gallons
Emission Factor (VOC)	0.0117		lb/gal
		2246.4	lb/yr
Tota VOC		**1.1232**	**ton/yr**
% Naphthalene (HAP)	0.50%	0.0056	ton/yr
% Ethyl Benzene (HAP)	0.50%	0.0056	ton/yr
Total HAPs		**0.011**	**ton/yr**

Degreaser

	Variables	Amounts	Units
Amount of Solvent Per Ye	10		gallons
Density of Solvent	6.7		lb/gallon
% VOC	100%	0.0335	(ton/yr) VOC
% HAPs	0.20%	0.000067	(ton/yr) HAP

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Emission Unit	Maximum Capacity	Pollutant	Emission Factor	Source of Emission Factor	PM	PM10	SOx	NOx	VOC	CO	Total HAPs
	(MMCF/Year)		Units: (lb/MMCF)								
Space Heaters	2.4	PM	1.90	AP-42	0.0023	0.0091	0.0007	0.1200	0.0066	0.1008	0.0023
		PM10	7.60	AP-42							
		SO2	0.60	AP-42							
		NOx	100.00	AP-42							
		VOC	5.50	AP-42							
		CO	84.00	AP-42							
		HAPs	Various								
Paint Booth	(gal/year)		Units: %		0.0073	0.0073			0.018		0.0019
	5.5	VOC	See MSDS	MSDS							
		PM	See MSDS	MSDS							
		HAPs	See MSDS	MSDS							
Fueling Station	(gal/year)		Units: lbs/1000 gal						1.12		0.011
	192,000	VOC	11.7	AP-42							
			Units: lbs/1000 gal*MSDS%								
		HAPs	11.7*MSDS %	AP-42 and MSDS							
Degreaser	(gal/year)		Units: %						0.034		0.0001
	10	VOC	100%	MSDS							
		HAPs	0.20%	MSDS							
Abrasive Blasting	See Page 1 of 1				1.708	1.708					
				Total	1.717	1.724	0.00072	0.1200	1.181	0.1008	0.0155