INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: December 17, 2013

RE: Hall Signs, Inc. / 105 - 33344 - 00050

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

Notice of Decision: Approval - Registration

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

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

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

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

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

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

Enclosures
FN-REGIS.dot 6/13/2013

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REGISTRATION
OFFICE OF AIR QUALITY

Hall Signs, Inc.
4495 West Vernal Pike
Bloomington, Indiana 47404

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. 105-33344-00050	
Issued by: Chrystal Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 17, 2013

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 signs and advertising printing operation.

Source Address:	Hall Signs, Inc., 4495 West Vernal Pike Bloomington, Indiana 47404
General Source Phone Number:	800-284-7446
SIC Code:	3993
County Location:	Monroe County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary signs and advertising printing source consists of the following emission units:

(a) Sign Shop Operations, consists of a back-splitter, shaker, sign machine, screening equipment, and screen presses related to the sign shop activities.

(b) Print Shop Operations, consists of a slip sheet machine, paper cutting activities, banding, wash booths, printers, laminators, and plotters related to the print shop activities:

(c) Metal Shop Operations, consists of a drill presses, saws, sanders, welders, shears, punches and general equipment related to metal shop activities.

(d) Insignificant Units consists of drip baskets, chemical tanks, tank baskets, air compressor pump and dryer that do not contribute to the potential emissions at the source.

(e) Chromium Reduction system, in service in 1996, as follows:

Tank	Capacity	Content
1	2000 gallons	Water
2	2000 gallons	Water
3	2000 gallons	Nitric Acid (4%)
4	2000 gallons	Caustic Soda (4%)
5	2000 gallons	Chrome Solution (2%)
6	2000 gallons	Water
7	2000 gallons	Water

(f) Natural Gas Combustion units, as follows:

Description	BTU	Location
Small hanging unit	24,600	Air compressor room
Tank drying room	175,000	Tanks
(5)Warehouse Hanging units	125,000	Warehouse
Packing oven	175,000	packing
(4)Tank heaters	100,000	Tanks

Roof	250,000	Roof
Roof	400,000	Roof
Roof	250,000	Roof
Roof	100,000	Roof

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. 105-33344-00050 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).

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:	**Hall Signs, Inc.**
Address:	4495 West Vernal Pike
City:	Bloomington, IN 47404
Phone Number:	**800-284-7446**
Registration No.:	105-33344-00050

I hereby certify that Hall Signs, Inc. is :
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that Hall Signs, Inc. is :
- ☐ in compliance with the requirements of Registration No. 105-33344-00050.
- ☐ not in compliance with the requirements of Registration No. 105-33344-00050.

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

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

Noncompliance:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Description and Location

Source Name:	**Hall Signs, Inc.**
Source Location:	**4495 West Vernal Pike, Bloomington, IN 47404**
County:	**Monroe**
SIC Code:	**3993**
Registration No.:	**R105-33344-00050**
Permit Reviewer:	**Roger Osburn**

On June 25, 2013, the Office of Air Quality (OAQ) received an application from Hall Signs, Inc. related to the operation of an existing stationary signs and advertising printing operation.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Monroe County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Monroe County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 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.

(c) Other Criteria Pollutants
Monroe County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

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

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Hall Signs, Inc. on June 25, 2013, relating to a sign and advertising operation. This source will be issued a registration pursuant to 326 IAC 2-5.5-1(b)(1).

The source consists of the following emission units:

(a) Sign Shop Operations, consists of a back-splitter, shaker, sign machine, screening equipment, and screen presses related to the sign shop activities.

(b) Print Shop Operations, consists of a slip sheet machine, paper cutting activities, banding, wash booths, printers, laminators, and plotters related to the print shop activities:

(c) Metal Shop Operations, consists of a drill presses, saws, sanders, welders, shears, punches and general equipment related to metal shop activities.

(d) Insignificant Units consists of drip baskets, chemical tanks, tank baskets, air compressor pump and dryer that do not contribute to the potential emissions at the source.

(e) Chromium Reduction system, in service in 1996, as follows:

Tank	Capacity	Content
1	2000 gallons	Water
2	2000 gallons	Water
3	2000 gallons	Nitric Acid (4%)
4	2000 gallons	Caustic Soda (4%)
5	2000 gallons	Chrome Solution (2%)
6	2000 gallons	Water
7	2000 gallons	Water

(f) Natural Gas Combustion units, as follows:

Description	BTU	Location
Small hanging unit	24,600	Air compressor room
Tank drying room	175,000	Tanks
Five (5) Warehouse Hanging units	125,000 each	Warehouse
Packing oven	175,000	packing
Four (4) Tank heaters	100,000 each	Tanks
Roof	250,000	Roof
Roof	400,000	Roof
Roof	250,000	Roof
Roof	100,000	Roof

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

	Potential To Emit of the Entire Source (tons/year)									
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$*	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Sign Shop	--	--	--	--	--	6.03	--	--	0.0	0.0
Print Shop	--	--	--	--	--	4.57	--	--	0.0	0.0
Metal Shop	--	--	--	--	--	6.06	--	--	0.0	0.0
Combustion	0.01	0.05	0.05	0.0	0.69	0.06	0.58	835	0.01	0.01
Total PTE of Entire Source	**negl.**	**0.1**	**0.1**	**negl.**	**1.03**	**16.72**	**0.87**	**1,244**	**negl.**	**negl.**
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	< 5 or < 10	< 25	< 100,000	< 25	< 10
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 100,000	< 25	< 10

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject-to-regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject-to-regulation threshold of one hundred thousand (100,000) tons of CO_2

equivalent (CO_2e) emissions per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the registration.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(b) Subpart XXXXXX—National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories does not apply to this source because the source is not primarily engaged in fabricated metal products operations as defined in Part 63.11522.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the registration.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

(a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The 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, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

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

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(e) 326 IAC 6-3 (Particulate Emissions Limitations)
326 IAC 6-3 (Particulate Emissions Limitations) does not apply to the emission units, because each of these emissions units has a potential to emit PM emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

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

(h) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(g) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

(i) 326 IAC 8-2-9 (Miscellaneous metal and plastic coating operations)
The source is not subject to the requirements of 326 IAC 8-2-9, because the source is not located in one of the listed counties and does not have the potential to emit VOCs greater than twenty-five (25) tons per year.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on June 25, 2013.

The operation of this source shall be subject to the conditions of the attached Registration No. 105-33344-00050. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Roger Osburn at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0242 or toll free at 1-800-451-6027 extension 2-0242.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emissions Calculations
HAP Emissions Surface Coating
Company Name: Hall Signs, Inc.
Address City IN Zip: 4495 West Vernal Pike, IN 47404
Permit Number: 105-33344-00050
Reviewer: Roger Osburn
Date: 9/30/2013

Hazardous Air Pollutants

Material	Material ID	Density (lb/gal)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Single Highest HAP %	Single Highest HAP	Combined HAP %	PTE Single HAP (lb/hr)	PTE Single HAP (ton/yr)	PTE Combined HAPs (lb/hr)	PTE Combined HAPs (ton/yr)	Application Method	Substrate
Thinner*	3M 711N	7.51	0.010	1.000	0.70%	Napthalene	0.70%	0.0005	0.00230	0.00053	0.00230	Hand	Aluminum

* worst case scenerio for HAPs

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Hall Signs, Inc.
Address City IN Zip: 4495 West Vernal Pike, Bloomington
Permit Number: 105-33344-00050
Reviewer: Roger Osburn
Date: 9/30/2013

Combustion Units	BTU
Small Hanging Unit	24,000
Tank Drying room	175,000
Warehouse hanging units	625,000
Packing oven	175,000
Tank heaters	400,000
Roof (2)	500,000
Roof	400,000
Roof	100,000
Generator	11,953
Total	2,410,953

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
2.4	1020	20.6

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	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

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

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichloro-benzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
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	2.164E-05	1.237E-05	7.729E-04	1.855E-02	3.504E-05	**1.939E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	5.153E-06	1.134E-05	1.443E-05	3.916E-06	2.164E-05	**5.648E-05**
					Total HAPs	**1.945E-02**
					Worst HAP	**1.855E-02**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,237	0.0	0.0
Summed Potential Emissions in tons/yr	1,237		
CO2e Total in tons/yr	1,244		

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

VOC Emissions from Metal Shop

Company Name: **Hall Signs, Inc.**

Address City IN Zip: **4495 West Vernal Pike, IN 47404**

Permit Number: **105-33344-00050**

Reviewer: **Roger Osburn**

Date: **9/30/2013**

Metal Shop Emission Calculations

MSDS Spreadsheet ID	Usage/year	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water or exempt solvent	Weight % Organics	Volume % Water	Pounds VOC per gallon of coating less exempt	Pounds voc per gallon of coating	Hourly Usage (unit/hour)	VOC EMISSION RATE (lbs/hr)
1	17600 lbs		0.00%	0.00%	0.00%	0.00%	0	0	9.78	0.000
2	55 gal	6.34	100.00%	0.00%	100.00%	0.00%	6.34	6.34	0.03	0.194
3	1 quart	9.0072	0.00%	0.00%	0.00%	0.00%	0	0	0.00	0.000
4	1 quart	9.174	0.00%	0.00%	0.00%	0.00%	0	0	0.00	0.000
5	50 lbs	12.51	0.00%	0.00%	0.00%	0.00%	0	0	0.03	0.000
6	75 lbs	-	0.00%	0.00%	0.00%	0.00%	0	0	0.04	0.000
7	165 gal	8.34	0.00%	0.00%	0.00%	0.00%	0	0	0.09	0.000
8	110 gal	11.51	50.00%	0.00%	50.00%	0.00%	5.75	5.75	0.06	0.352
9	110 gal	10.5084	0.00%	0.00%	0.00%	0.00%	0	0	0.06	0.000
10	165 gal	12.6768	0.00%	0.00%	0.00%	0.00%	0	0	0.09	0.000
11	275 gal	10.3416	0.00%	0.00%	0.00%	0.00%	0	0	0.15	0.000
12	165 gal	9.7578	0.00%	0.00%	0.00%	0.00%	0	0	0.09	0.000
13	1 gal	7.1724	0.00%	0.00%	0.00%	0.00%	0	0	0.00	0.000
14	0.5 gal	7.1724	0.00%	0.00%	0.00%	0.00%	0	0	0.00	0.000
15	45 lbs	-	0.00%	0.00%	0.00%	0.00%	0	0	0.03	0.000
16	600 lbs	12.09	100.00%	100.00%	0.00%	0.00%	0.00	12.09	0.00	0.000
17	7 lbs	-	0.00%	0.00%	0.00%	0.00%	0	0	0.00	0.000
18	240 lbs	1.14	100.00%	2.50%	97.50%	0.00%	1.11	1.14	0.13	0.130
19	45 gal	7.51	100.00%	0.00%	100.00%	0.00%	7.51	7.51	0.03	0.188
20	75 gal	7.26	100.00%	0.00%	100.00%	0.00%	7.26	7.26	0.04	0.302
21	1800 lbs	-	0.00%	0.00%	0.00%	0.00%	0	0	1.00	0.000
22	393 lbs	6.57	100.00%	0.00%	100.00%	0.00%	6.57	6.57	0.22	0.218

Note: Usage is the greater of either 2012 purchases or current inventory **1.38**

Assumes there are no exempt solvents **Total PTE (tons/yr)** **6.06**

Assumes that all material vaporizes and is released to atmosphere

Methodology

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

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

Potential VOC Tons per Year = VOC Emission Rate (lbs/hour) * (8760 hr/yr) * (1 ton/2000 lbs)

Hourly usage = Usage per Year/Operational hours (1800 hours)

Operational hours were derived from the actual hours of operation supplied by the Permittee (4 days per week*9 hours per day*50 weeks per year)
IDEM has accepted this method to determine the hourly usage.

Appendix A: Emissions Calculations

VOC Emissions from Print Shop

Company Name: Hall Signs, Inc.

Address City IN Zip: 4495 West Vernal Pike, IN 47404

Permit Number: 105-33344-00050

Reviewer: Roger Osburn

Date: 9/30/2013

Print Shop Emission Calculations										
MSDS Spreadsheet ID	Usage/year	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water or exempt solvent	Weight % Organics	Volume % Water	Pounds VOC per gallon of coating less exempt	Pounds voc per gallon of coating	Hourly Usage (unit/hour)	VOC EMISSION RATE (lb/hrs)
1	56 gal	8.2566	65.00%	0.00%	65.00%	0.00%	5.37	5.37	0.03	0.17
2	56 gal	8.2566	65.00%	0.00%	65.00%	0.00%	5.37	5.37	0.03	0.17
3	1279 lbs	-	100.00%	0.00%	100.00%	0.00%	-	-	0.71	0.71

Note: Usage is the greater of either 2012 purchases or current inventory **1.04**

Assumes there are no exempt solvents **Total PTE (tons/yr)** **4.57**

Assumes that all material vaporizes and is released to atmosphere

Methodology

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

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

Potential VOC Tons per Year = VOC Emission Rate (lbs/hour) * (8760 hr/yr) * (1 ton/2000 lbs)

Hourly usage = Usage per Year/Operational hours (1800 hours)

Operational hours were derived from the actual hours of operation supplied by the Permittee (4 days per week*9 hours per day*50 weeks per year) IDEM has accepted this method to determine the hourly usage

Appendix A: Emissions Calculations
VOC Emissions from Sign Shop
Company Name: Hall Signs, Inc.
Address City IN Zip: 4495 West Vernal Pike, IN 47404
Permit Number: 105-33344-00050
Reviewer: Roger Osburn
Date: 9/30/2013

Sign Shop Emission Calculations

MSDS Spreadsheet ID	Usage/year	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water or exempt solvent	Weight % Organics	Volume % Water	Pounds VOC per gallon of coating less water	Pounds voc per gallon of coating	Hourly Usage (unit/hour)	VOC EMISSION RATE (lbs/hr)
1	1424 lbs	6.46	100.00%	0.00%	100.00%	0.00%	6.46	6.46	0.791	0.791
2	24 gals	7.51	100.00%	0.00%	100.00%	0.00%	7.51	7.51	0.013	0.100
3	1 gal	7.51	100.00%	0.00%	100.00%	0.00%	7.51	7.51	0.001	0.004
4	9 gal	8.40	-	0.00%	-	0.00%	5.80	5.80	0.005	0.029
5	3 gal	7.51	100.00%	0.00%	100.00%	0.00%	7.51	7.51	0.002	0.013
6	20 cartridges	0.74	100.00%	0.00%	100.00%	0.00%	0.74	0.74	0.001	0.001
7	45 cartridges	0.74	100.00%	0.00%	100.00%	0.00%	0.74	0.74	0.003	0.002
8	39 cartridges	8.06	100.00%	0.00%	100.00%	0.00%	8.06	8.06	0.003	0.021
9	44 cartridges	0.74	100.00%	0.00%	100.00%	0.00%	0.74	0.74	0.003	0.002
10	1 gal	7.86	100.00%	0.00%	100.00%	0.00%	7.86	7.86	0.001	0.004
11	6 gal	8.30	-	0.00%	-	0.00%	4.80	4.80	0.003	0.016
12	1 gal	8.10	-	0.00%	-	0.00%	4.20	4.20	0.001	0.002
13	1 gal	8.76	100.00%	0.00%	100.00%	0.00%	8.76	8.76	0.001	0.005
14	1 gal	10.17	100.00%	0.00%	100.00%	0.00%	10.17	10.17	0.001	0.006
15	20 gal	8.84	100.00%	45.00%	55.00%	0.00%	4.86	8.84	0.011	0.054
16	32 oz	8.76	100.00%	0.00%	100.00%	0.00%	8.76	8.76	0.000	0.000
17	16 oz	8.34	100.00%	35.00%	65.00%	0.00%	5.42	8.34	0.000	0.000
18	5 gal	7.90	100.00%	0.00%	100.00%	0.00%	7.90	7.90	0.003	0.022
19	4.2 lbs	32.23	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.002	0.000
20	3 gal	8.26	65.00%	0.00%	65.00%	0.00%	5.37	5.37	0.002	0.009
21	4 gal	8.34	65.00%	0.00%	65.00%	0.00%	5.42	5.42	0.002	0.012
22	2 gal	7.92	75.00%	0.00%	75.00%	0.00%	5.94	5.94	0.001	0.007
23	2 gal	7.92	70.00%	0.00%	70.00%	0.00%	5.55	5.55	0.001	0.006
24	4 gal	7.92	75.00%	0.00%	75.00%	0.00%	5.94	5.94	0.002	0.013
25	2 gal	8.17	65.00%	0.00%	65.00%	0.00%	5.31	5.31	0.001	0.006
26	1 gal	8.17	65.00%	0.00%	65.00%	0.00%	5.31	5.31	0.001	0.003
27	3 gal	8.17	65.00%	0.00%	65.00%	0.00%	5.31	5.31	0.002	0.009
28	2 gal	8.17	65.00%	0.00%	65.00%	0.00%	5.31	5.31	0.001	0.006
29	0	7.80	-	0.00%	-	0.00%	3.00	3.00	0.000	0.000
30	1 gal	8.90	-	0.00%	-	0.00%	5.70	5.70	0.001	0.003
31	4 gal	8.90	-	0.00%	-	0.00%	5.70	5.70	0.002	0.013
32	2 gal	9.00	-	0.00%	-	0.00%	5.50	5.50	0.001	0.006
33	6 gal	8.90	-	0.00%	-	0.00%	5.60	5.60	0.003	0.019
34	2 gal	9.00	-	0.00%	-	0.00%	5.70	5.70	0.001	0.006
35	2 gal	8.90	-	0.00%	-	0.00%	5.70	5.70	0.019	0.111
36	5 gal	8.90	-	0.00%	-	0.00%	5.70	5.70	0.003	0.016
37	2 gal	7.30	100.00%	0.00%	100.00%	0.00%	7.30	7.30	0.001	0.008
38	2 gal	6.50	100.00%	0.00%	100.00%	0.00%	6.50	6.50	0.001	0.007
39	136 oz	8.21	100.00%	45.00%	55.00%	0.00%	4.51	8.21	0.001	0.003
40	6 gal	7.49	100.00%	0.00%	100.00%	0.00%	7.49	7.49	0.003	0.025
41	4 gal	7.26	100.00%	0.00%	100.00%	0.00%	7.26	7.26	0.002	0.016

Note: Usage is the greater of either 2012 purchases or current inventory **1.38**
Assumes there are no exempt solvents Total PTE (tons/yr) **6.03**
Assumes that all material vaporizes and is released to atmosphere
1 Cartridge = 0.12 gallons = 450 mL

Methodology

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

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

Potential VOC Tons per Year = VOC Emission Rate (lbs/hour) * (8760 hr/yr) * (1 ton/2000 lbs)

Hourly usage = Usage per Year/Operational hours (1800 hours)

Operational hours were derived from the actual hours of operation supplied by the Permittee (4 days per week*9 hours per day*50 weeks per year). IDEM has accepted this method to determine the hourly usage.

Appendix A: Emissions Calculations

Summary

Company Name: Hall Signs, Inc.

Address City IN Zip: 4495 West Vernal Pike, IN 47404

Permit Number: 105-33344-00050

Reviewer: Roger Osburn

Date: 9/30/2013

	Potential Emissions (ton/yr)								
Emission Unit/Process	PM	$PM_{10}/PM_{2.5}$	SO2	VOC	CO	NOx	GHG's	Single HAP	Combined HAPs
Sign Shop	0.0	0.0	--	6.03	--	--	--	0.0	0.0
Print Shop	0.0	0.0	--	4.57	--	--	--	0.0	0.0
Metal Shop	0.0	0.0	--	6.06	--	--	--	0.00	0.00
Thinner	--	--	--					0.00	0.00
Combustion	0.02	0.08	0.01	0.06	0.87	1.03	1,244	0.02	0.02
Totals:	0.0	0.1	0.01	16.72	0.87	1.03	1,244	0.02	0.02

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Randy Barnard
Hall Signs, Inc.
4495 W Vernal Pike
Bloomington, IN 47404

DATE: December 17, 2013

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

SUBJECT: Final Decision
Registration
105 - 33344 - 00050

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:
Brenda Mathew Keramida Environmental, Inc.
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.

Mail Code 61-53

IDEM Staff	LPOGOST 12/17/2013 Hall Signs, Inc 105 - 33344 - 00050 final)		
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Randy Barnard Hall Signs, Inc 4495 W Vernal Pike Bloomington IN 47404 (Source CAATS) Via confirmed delivery									
2		MD Monroe County Health Department 119 W 7th St Bloomington IN 47404-3989 *(Health Department)*									
3		Bloomington City Council and Mayors Office 401 N. Morton St. Bloomington IN 47402 *(Local Official)*									
4		Mr. Richard Monday 545 E. Margaret Dr. Terre Haute IN 47801 *(Affected Party)*									
5		Monroe County Commissioners Monroe County Courthouse, Room 322 Bloomington IN 47404 *(Local Official)*									
6		Brenda Mathew Keramida Environmental, Inc. 401 North College Indianapolis IN 46202 *(Consultant)*									
7											
8											
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

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