

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Chariot Vans, Inc.
28868 Paul Drive
Elkhart, Indiana 46514**

is hereby authorized to construct

a plant that does customized top coating of vans, consisting of the following facilities:

- (a) One (1) paint booth, which is capable of a customized top coating of one (1) van per hour. This booth is equipped with High Volume Low Pressure (HVLV) spray gun. The PM overspray emissions are controlled by dry filters, and
- (b) One (1) natural gas-fired air make-up unit, identified as ID #1, which has a heat input capacity of 1.8 million British Thermal Unit per hour (mmBtu/hr).

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-039-9045-00477	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1-7.1(Fees).
 - (e) Pursuant to 326 IAC 2-1-4, the Permittee shall apply for an operation permit renewal at

least ninety (90) days prior to the expiration date established in the validation letter. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this customized top coating of vans is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.
 - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
 - (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 permit shall not require revocation of this permit.
 - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
 - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Annual Emission Reporting

7. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30.

Opacity Limitations

8. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
 - (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

PM Overspray Allowable Emissions

9. (a) The dry filters for particulate matter overspray control shall be in placed at all times when the paint booth is in operation.
- (b) The paint booth shall comply with 326 IAC 6-3-2(c) using the following equation:
- $$E = 4.10P^{0.67}$$
- where: E = rate of emission in pounds per hour,
P = process weight in tons per hour, if
P is equal to or less than 60,000 lbs/hr (30 tons/hr)
- (c) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the dry filters.
- (d) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed.
- (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

- Hazardous Air Pollutant (HAPs)
10. That pursuant to 326 IAC 2-1-3(i)(8), records of surface coating quantities and organic solvent contents shall be maintained for a minimum period of 36 months and made available upon request of the Office of Air Management (OAM). Any change or modification which may increase potential single HAP emissions to 10 tons per year and any combined HAPs to 25 tons per year from the equipment covered in this permit shall obtain a prior approval, and be subject to 326 IAC 2-7, Part 70 requirements.

- BACT Minor Limitation
11. That input volatile organic compounds (VOC) including clean up solvent, minus the VOC solvent shipped out, delivered to the applicators of the paint booth shall be limited to 22 tons per year, based on a twelve-month period, rolled on a monthly basis.

During the first twelve months of operation, VOC usage shall be limited such that the total VOC used divided by accumulated months of operation shall not exceed the limit specified. Therefore, 326 IAC 8-1-6 will not apply.

- Customized Van Production
12. That any change or modification which may increase the capability of the paint booth's production to thirty-five (35) customized top coated vans per day shall require prior approval and be subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations).

Reporting Requirements

13. That a log of information necessary to document compliance with operation permit condition nos. 10, and 11 shall be maintained. These records shall be kept for at least the past 36 month period and shall include the coating, thinner and clean up solvent usage, material safety data sheet (MSDS) and the date of use, and made available upon request to the Office of Air Management (OAM).

- (a) For operation permit condition no.11 a quarterly summary shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within thirty (30) calendar days after the end of the quarter being reported in the format attached.

- (b) Unless otherwise specified in this permit, any notice, report, or other submissions required by this permit shall be timely if:
- (i) Postmarked on or before the date it is due; or
 - (ii) Delivered by any other method if it is received and stamped by IDEM, OAM, on or before the date it is due.
- (c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.
- (d) Any corrective actions taken as a result of an exceedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.
- (e) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

Open Burning

14. The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. This condition is not federally enforceable.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Chariot Vans, Inc.
 Source Location: 28868 Paul Drive, Elkhart, Indiana 46514
 County: Elkhart
 Construction Permit No.: CP-039-9045-00477
 SIC Code: 3711
 Permit Reviewer: Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Chariot Vans, Inc. relating to the construction and operation of a source that does customized top coating of vans, consisting of the following facilities:

- (a) One (1) paint booth, which is capable of a customized top coating of one (1) van per hour. This booth is equipped with High Volume Low Pressure (HVLV) spray gun. The PM overspray emissions are controlled by dry filters, and
- (b) One (1) natural gas-fired air make-up unit, identified as ID #1, which has a heat input capacity of 1.8 million British Thermal Unit per hour (mmBtu/hr).

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
2	Paint booth	19" 6"	2	7,115	ambient
1	Natural gas-fired air make-up unit	6'	4	20,000	ambient

Recommendation

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

Information, unless otherwise stated, 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 October 10, 1997, with additional information received on December 19, 1997 .

Emissions Calculations

- (1) Paint Booth:
 See page 1 of 3 and 2 of 3 TSD Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

Dry filters will control the PM overspray.

$$\begin{aligned} \text{PM Overspray Controlled Emissions} &= 1.43 \text{ ton/yr} (1-0.95) \\ &= 0.1 \text{ ton/yr} \end{aligned}$$

- (2) Natural gas-fired combustion:
 See page 3 of 3 TSD Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	1.53	1.53
Particulate Matter (PM10)	1.53	1.53
Sulfur Dioxide (SO ₂)	0.0	0.0
Volatile Organic Compounds (VOC)	27.4	27.4
Carbon Monoxide (CO)	0.2	0.2
Nitrogen Oxides (NO _x)	0.8	0.8
Single Hazardous Air Pollutant (HAP)	7.1	7.1
Combination of HAPs	13.2	13.2

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. This rule mandates an allowable PM overspray emissions using the following equation:

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

Where:

- E = PM allowable emissions in pounds per hour
- P = Process weight rate in tons per hour

- (b) The potential emissions before control are synonymous with the allowable emissions, therefore, the potential emissions or allowable emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of volatile organic compounds (VOC) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.2
PM10	0.2
SO ₂	0.0
VOC	24.0
CO	0.2
NO _x	0.8
Single HAP	6.2
Combination HAPs	11.6

- (a) The paint booth is subject to 326 IAC 8-1-6. The source had requested a 24 tons VOC emissions limit to avoid the requirements of this rule. The HAPs emissions are scaled down, since the material usage is limited to restrict VOC emissions to 24 tons per year. See calculation below:

$$\begin{aligned} \text{Single HAP limit} &= 7.1 \text{ ton/yr} / 27.4 \text{ ton/yr} * (24 \text{ ton/yr}) \\ &= 6.2 \text{ tons/year} \end{aligned}$$

$$\begin{aligned} \text{Combined HAPs Limit} &= 13.2 \text{ ton/yr} / 27.4 \text{ ton/yr} * (24 \text{ ton/yr}) \\ &= 11.6 \text{ tons/year} \end{aligned}$$

The averaging time that the source had chosen for their reporting is monthly rolling therefore, the yearly limit will be reduced by one month. See below calculations:

$$\begin{aligned} \text{VOC Limit} &= 24 \text{ tons/year} * (11/12) \\ &= 22 \text{ tons/year} \end{aligned}$$

Methodology:

Single HAP Limit = HAP pot'l emission, ton/yr / total VOC pot'l emissions, ton/yr * (VOC limit, ton/yr)

Combined HAPs Limit = total combined HAPs, ton/yr / total VOC pot'l emissions, ton/yr * (VOC limit, ton/yr)

- (b) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 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 40 CFR 52.21, the PSD 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/year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (1) New Source Performance Standards:
40 CFR 60.390, Subpart MM - Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operations. This standard is applicable to automobiles and light duty trucks assembly plants: each prime coat operation, guide coat operation and topcoat operation.

This NSPS is not applicable to this source, because it is not an assembly plant and does not involve primer coating, and top coating of the entire automobile. The source deals only with customizing of vans, which entails coating small portion of already painted van.

- (2) There are no other NSPS, 40 CFR Part 60 applicable to this source.
- (3) National Emissions Standard for Hazardous Air Pollutant (NESHAP):
There are no NESHAP, 40 CFR Part 63, applicable to this source .

State Rule Applicability

- (1) 326 IAC 2-6 (Emission Reporting)
This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source is located in Elkhart County and emits more than 10 tons/yr of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the

facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

- (2) 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)
The 1.8 mmBtu/hr) natural gas fired air make-up unit is not subject 326 IAC 6-2, because it is not source of indirect heating.
- (3) 326 IAC 8-2-2 (Surface Coating Emission Limitations: Automobile and Light Duty Truck Coating Operation)
This rule applies to automobile and light duty truck assembly plants, which deals with primer coating, and top coating of these vehicles. This rule is not applicable to this source, because it is not an assembly plant and it only deals with customized top coating of already painted vans.
- (4) 326 IAC 8-2-9 (Miscellaneous Metal Coating Operation)
The source which deals with customized top coating of vans does not have the capability to coat 35 vans per day, and therefore is not subject to this rule.
- (5) 326 IAC 8-1-6 (General Reduction Requirements)
The source is subject to this rule, since its VOC potential emissions are greater than 25 tons per year and there are no other 326 IAC 8 rules that applies to it. The source, however, requested a limit of 24 tons of VOC emissions per year. Therefore, this rule is not applicable in this case.
- (6) 326 IAC 2-1-3.1 (New Source Air Toxics Control)
The source is not major for hazardous air pollutant (HAPs), therefore, this rule is not applicable.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This new source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.
- (b) See page 2 of 3 TSD Appendix A for detailed air toxic calculations.

Conclusion

The construction of this plant that deals with customized top coating of vans will be subject to the

conditions of the attached proposed **Construction Permit No. CP-039-9045-00477.**

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Chariot Vans, Inc.
Address City IN Zip: 28868 Paul Dr., Elkhart, IN 46514
CP: 039-9045
Plt ID: 039-00477
Reviewer: Aida De Guzman
Date: 12/11/97

Material	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	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
B1																
Thinner	7.0	100.00%	0.0%	100.0%	0.0%	0.00%	0.25000	1.000	7.00	7.00	1.75	42.00	7.67	0.00	ERR	75%
Primer	12.9	30.00%	0.0%	30.0%	0.0%	46.50%	0.13000	1.000	3.87	3.87	0.50	12.07	2.20	1.29	8.32	75%
Black paint	7.5	76.00%	0.0%	76.0%	0.0%	19.50%	0.25000	1.000	5.70	5.70	1.43	34.20	6.24	0.49	29.23	75%
Reducer Solvent	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.28000	1.000	6.60	6.60	1.85	44.35	8.09	0.00	ERR	75%
Clear	7.9	67.00%	0.0%	67.0%	0.0%	32.90%	0.50000	1.000	5.30	5.30	2.65	63.60	11.61	1.43	16.11	75%
Hardener	8.1	61.00%	0.0%	61.0%	0.0%	32.40%	0.13000	1.000	4.93	4.93	0.64	15.38	2.81	0.45	15.21	75%

State Potential Emissions

Add worst case coating to all solvents

149.95

27.40

1.43

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 Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC 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 VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations
 Natural Gas Combustion Only
 MM Btu/hr 0.3 - < 10
 Commercial Boiler**

Company Name: Chariot Vans, Inc.
Address City IN Zip: 28868 Paul Dr., Elkhart, IN 46514
CP: 039-9045
Plt ID: 039-00477
Reviewer: Aida De Guzman
Date: 12/18/97

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

1.8
air make-up unit

15.8

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.1	0.1	0.0	0.8	0.0	0.2

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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

