

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**Good Roads, Inc.  
537 State Road 28 East  
Williamsport, IN 47993**

is hereby authorized to construct the equipment listed in the Page 2 of this permit.

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-171-10412-00011	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

- (a) Six (6) natural gas-fired space heaters, identified as H1 through H6, each with a maximum heat input capacity of 0.20 million BTU per hour and exhausts to the atmosphere.
- (b) Two (2) spray booths, identified as SB1 and SB2, one for applying a prime coat to the small metal parts that compose the final products, and the other for applying a topcoat to the final metal products including hitches, spreaders and plows, overspray controlled by dry filters.
- (c) Five (5) welders with a maximum metal usage of 1800 pounds per hour and a maximum wire usage of 5 pounds per hour.

## 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 metalworking operation 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, (local agency if applicable) or other public official having jurisdiction.

Malfunction Condition

7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
  - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
  - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
  - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Opacity Limitations

8. That pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the opacity shall meet the following, unless otherwise stated in this permit:
- (a) opacity shall not exceed an average of 40% in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) opacity shall not exceed 60% for more than a cumulative total of 15 minutes (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.

Process Operations

9. That pursuant to 326 IAC 6-3 (Process Operations), the particulate matter (PM) emissions from the welding operation shall not exceed the rate of 3.8 pounds per hour.
10. That pursuant to 326 IAC 6-3 (Process Operations):
- (a) The dry filters for the particulate matter overspray control shall be in operation at all times when the paint booth is in operation.
  - (b) The painting operation 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) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Volatile Organic Compound (VOC) Limitations

11. That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to the small metal parts shall be limited to:

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Forced Air Dried Coat	3.5

- Emission Minimization
12. That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

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

Technical Support Document (TSD) for New Construction and Operation

**Source Background and Description**

Source Name: Good Roads, Inc.  
 Source Location: 537 State Road 28 East, Williamsport, Indiana  
 County: Warren  
 Construction Permit No.: 171-10412-00011  
 SIC Code: 3714  
 Permit Reviewer: Hua R. Zhu

The Office of Air Management (OAM) has reviewed an application from Good Roads, Inc. (Good Roads) relating to the construction and operation of the following equipment:

- (a) Six (6) natural gas-fired space heaters, identified as H1 through H6, each with a maximum heat input capacity of 0.20 million BTU per hour and exhausts to the atmosphere.
- (b) Two (2) spray booths, identified as SB1 and SB2, one for applying a prime coat to the small metal parts that compose the final products, and the other for applying a topcoat to the final metal products including hitches, spreaders and plows, overspray controlled by dry filters with an emission control efficiency of 98.0%.
- (c) Five (5) welders with a maximum metal usage of 1800 pounds per hour and a maximum wire usage of 5 pounds per hour.

**Stack Summary**

Stack ID	Operation	Height (feet inside)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SB1	Spray Booth #1	24	2.83	28,000	Ambient
SB2	Spray Booth #2	24	4	15,000	Ambient
H1	Heater #1	22	0.58	Natural Draft	Estimated 100
H2	Heater #2	22	0.58	Natural Draft	Estimated 100
H3	Heater #3	22	0.58	Natural Draft	Estimated 100
H4	Heater #4	22	0.58	Natural Draft	Estimated 100
H5	Heater #5	17	0.5	Natural Draft	Estimated 100
H6	Heater #6	12	0.5	Natural Draft	Estimated 100

To add up the total heat input capacity for the six natural gas-fired space heaters :

$$0.2 \times 6 = 1.2 \text{ MMBtu/hr}$$

Therefore, the source has a total heat input capacity of 1.2 million BTU per hour.

Since only one (1) spray gun and one (1) paint is actually used at a time in each booth, and since the paint of F78W30, Low Gloss White, contains the highest amount of emission pollutants, the emission from this paint is calculated in each booth for worst case emission calculation purposes.

### 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.

A complete application for the purposes of this review was received on November 23, 1998.

### Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (3 pages).

### 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)	34.6	28.5
Particulate Matter (PM10)	34.6	28.5
Sulfur Dioxide (SO <sub>2</sub> )	-	negligible
Volatile Organic Compounds (VOC)	-	13.2
Carbon Monoxide (CO)	-	0.4
Nitrogen Oxides (NO <sub>x</sub> )	-	0.5
Single Hazardous Air Pollutant (HAP)	-	8.4
Combination of HAPs	-	8.4

- (a) Allowable emissions of particulate matter (PM) are determined from the applicability of rule 326 IAC 6-3-2(c).

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds; and} \\ P = \text{process weight rate in tons per hour}$$

See attached Appendix B (Allowable Emission Calculations) for detailed calculations (1 page).

- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.

- (c) There are no federal or state rules applicable to SO<sub>2</sub>, VOC, CO and NO<sub>x</sub> emissions, therefore potential emissions are used as allowable emissions for these pollutants for the permitting determination.
- (d) Allowable emissions (as defined in the Indiana Rule) of PM 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) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Warren County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Warren County has been classified as attainment or unclassifiable for all other regulated air 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.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM	0.66
PM10	0.66
SO <sub>2</sub>	negligible
VOC	13.2
CO	0.4
NO <sub>x</sub>	0.5
Single HAP	8.4
Combination HAPs	8.4

- (a) 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, 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, and 40 CFR 52.21, 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/year.

This is the first air approval issued to this source.

### Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) and no National Emission Standards for Hazardous Air Pollutants (326 IAC 14 and 20 and 40 CFR Part 63) applicable to this facility.

### State Rule Applicability

#### 326 IAC 6-3 (Process Operations):

- (a) The particulate matter (PM) emissions from the welding operation shall not exceed the rate of 3.8 pounds per hour.  
(b) The paint booth operation shall comply with 326 IAC 6-3-2(c).

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the dry filters.  
(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.  
(e) That visible emission notations of all exhaust to the atmosphere from the dry filters shall be performed once per working shift. A trained employee will record whether emissions are normal or abnormal.

- (f) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time, the process is in operation, not counting start up or shut down time.
- (g) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.
- (h) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.
- (i) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

**326 IAC 8-2-9 (Miscellaneous metal coating operations)**

The VOC emissions are greater than 15 pounds per day, the metal parts are air dried and are under the Standard Industrial Classification Code of major group #37, therefore the operation is subject to the rule 326 IAC 8-2-9(d)(2)(Miscellaneous metal coating operations).

Pursuant to the rule 326 IAC 8-2-9 (d)(2) (Miscellaneous metal coating operations), no owner or operator may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of forty-two hundredths (0.42) kilograms per liter (three and five-tenths (3.5) pounds per gallon) of coating excluding water, delivered to a coating applicator in the coating application system.

Solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 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 attached spreadsheets for detailed air toxic calculations.
- (c) 326 IAC 2-1-3.4 does not apply to this facility because a single HAP is less than 10 tons per year and a combination of HAPs is less than 25 tons per year.
- (d) Any increase in HAPs emissions to 10 tons per year or more for a single HAP or 25 tons per year or more for a combination of HAPs, shall require prior approval by OAM.

## **Conclusion**

The construction of these two (2) spray booths, five (5) welding units and six (6) natural gas-fired space heaters will be subject to the conditions of the attached proposed **Construction Permit No. CP-171-10412-00011**.

VOC and Particulate  
From Surface Coating Operations

Company Name: Good Roads, Inc.  
Address City IN Zip: Williamsport, IN 47993  
CP: 171-10412  
Pit ID: 171-00011  
Reviewer: HRZ  
Date: 12-04-98

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 (uncontrolled)	lb VOC /gal solids	Transfer Efficiency	Filler Efficiency	Particulate Potential ton/yr (controlled)
SB1 F78W530, Low Gloss White	10.71	49.5%	35.4%	0.141	44.9%	34.6%	0.05	20	2.74	1.51	1.51	36.24	6.61	14.21	4.36	40%	98%	0.28
SB2 F78W530, Low Gloss White	10.71	49.5%	35.4%	0.141	44.9%	34.6%	0.25	4	2.74	1.51	1.51	36.24	6.61	14.21	4.36	40%	98%	0.28

3.02                      72.49                      13.23                      28.43

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 B: Allowable Emission Calculations

### **Allowable Emissions from the welding and coating:**

The paint booth and welding shall comply with 326 IAC 6-3-2(c)

Since the maximum metal usages for painting and welding are 2000 pounds per hour and 1800 pounds per hour respectively, allowable PM Emissions from these two process

$$= 4.1 + 3.8$$

$$= 7.9 \text{ lbs/hr}$$

$$= 7.9 \text{ (lbs/hr)} * (8760 \text{ hr/yr}) * (1 \text{ ton}/2000 \text{ lbs})$$

$$= 34.6 \text{ t/y}$$