

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

Elite Enterprises, Inc.  
2701 South Coliseum Boulevard  
Fort Wayne, Indiana 46803

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

This permit supersedes the previous permit CP 003-4988, issued to Elite Enterprises, Inc., on May 2, 1996. This permit, also, voids the previous permit CP 003-4393, issued to Composites OM, Inc., on May 2, 1996.

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-003-8519-00205	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

**Elite Enterprises, Inc.**  
**Fort Wayne, Indiana**

**CP-003-8519**  
**ID- 003-00205**

**Review Engineer: Dr. T. P. Sinha**

- (1) Paint Booths PB1, PB2, PB3, and PB4 (each equipped with a 8,200 acfm exhaust fan) with a maximum capacity of one of the following:
  - 120 plastic large end caps / hour,
  - 150 plastic air deflectors / hour,
  - 104 plastic door trim parts / hour,
  - 100 miscellaneous metal parts / hour,
  
- (2) Paint Booth PB5 (equipped with a 8,200 acfm exhaust fan) with a maximum capacity of one of the following:
  - 8 plastic tractor hoods / hour,
  - 12 plastic cab shelves / hour,
  - 30 metal military parts / hour,
  - 10 plastic E/P roofs / hour,
  - 12 plastic large end caps / hour,
  
- (3) Paint Booths PB8, PB9, PB10, and PB11 (each equipped with a 7,300 acfm exhaust fan) with a maximum capacity of one of the following:
  - 72 plastic E/P roofs / hour,
  - 100 plastic large end caps / hour,

all equipped with high volume low pressure (HVL) spray gun applications or electrostatic spray equipment and dry filters for air pollution control.

Paint booths PB1 through PB4 are set up like an assembly line operation, where the part moves on a hanging conveyor belt system through each of these booths. Paint booth PB5 is divided into two (2) sections, but vents to the same stack. Paint booths PB8 through PB11 are also set up as an assembly line operation, where the part travels through each booth for coating. Elite Enterprises, Inc., coats a variety of plastic and metal parts for the transportation (automotive and trucking), medical, consumer, and building industries.

- (4) Two (2) natural gas make-up-air heaters, AM1 and AM2, with maximum capacity of 3.0 million (MM) Btu/hr each, and
  
- (5) four (4) natural gas make-up-air heaters, AM3, AM4, AM5, and AM6, with maximum capacity of 1.5 million (MM) Btu/hr each.

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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 2-7-19 (Fees).
  - (e) The Permittee has submitted their Part 70 application (T 003-7588-00205) on December 13, 1996 for the existing source. The equipment being reviewed under this permit shall

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be incorporated in the submitted Part 70 application.

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 nine paint booths, and six make-up-air heaters, 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

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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.

PSD Minor Source Limit

- 7. That input volatile organic compounds (VOC) including clean up solvent, minus the VOC solvent shipped out, delivered to the high volume low pressure (HVLP) and electrostatic applicators of the nine paint booths shall be limited to 248.7 tons per year, based on a 365-day period, rolled on a daily basis.

During the first 365 days of operation, the input material usage shall be limited such that the total VOC usage divided by the accumulated days of operation shall not exceed 1,362.7 pounds. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

Annual Emission Reporting

- 8. 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 July 1 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  
Data Support 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 January 1 and ending December 31.

Opacity Limitations

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9. 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 surface coating (326 IAC 6)

10. That pursuant to 326 IAC 6-3 (Process Operations):

- (a) The control equipment i.e. dry filters for particulate matter overspray control shall be in operation at all times when the paint booths are in operation.
- (b) The paint booths 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 filters.
- (d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

General Requirements

11. That pursuant to 326 IAC 2-1-3(i)(8), the following conditions shall apply:

- (a) all vents shall be open at all times during surface coating operations to ensure proper ventilation,
- (b) coating, solvent and thinner daily usage records shall be maintained along with current Material Safety Data Sheets (MSDSs) and supplier information,
- (c) coating, solvent and thinner purchasing records shall be made available upon request,
- (d) substrate usage on each type of part coated shall be reported and made available upon request, and
- (e) records on the type and amount of parts coated on an hourly basis for each booth shall be maintained and located at the appropriate booth.

BACT Condition

12. That pursuant to 326 IAC 8-1-6, the surface coating operation shall comply with the best available control technology (BACT). BACT shall be considered satisfied provided that the following requirements are met:

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- a) high volume low pressure (HVLP) spray equipment shall be used for all first coat applications,
- b) either HVLP or electrostatic equipment shall be used for second coat applications,
- c) application of coating to a substrate by means of HVLP spray equipment shall operate between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system, and
- d) a test gauge air cap and air cap assembly shall be utilized on the HVLP spray equipment and recorded weekly.

Volatile Organic Compounds (VOC) Limitations for Plastic Parts

13. That pursuant to 326 IAC 8-1-6, the VOC content of the coatings as applied to the plastic parts shall not exceed the following limits:

- a) 5.8 lb VOC/gallon of coating, minus water for topcoats, and
- b) 3.7 lb VOC/gallon of coating, minus water for prime coats.

Volatile Organic Compounds (VOC) Limitations for Metal Parts

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

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Air Dried Coat	3.5
Extreme Performance Coat	3.5
All Other Coat	3.0

Emission Minimization

15. 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.

Reporting Requirements

16. That a log of information necessary to document compliance with operation permit condition nos. 7, 10 (a), (c), 11, 13, and 14 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).

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- (a) 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. These records shall include the coating, thinner and clean up solvent usage, material safety data sheet (MSDS) and the date of use.

- (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.

Emergency Reduction Plans

17. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on April 25, 1997.
- (b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.
- (c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in

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effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

18. That the Compositives OM, Inc. shall remove all equipment covered under permit no. CP 003-4393 from operation before Elite Enterprises, Inc. increases the emissions from its permitted level of 99 tons per year from the paint booths (PB1, PB2, PB3, PB4, PB5, PB8, PB9, PB10, and PB11).

**Indiana Department of Environmental Management  
Office of Air Management  
Compliance Data Section**

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Company Name: Elite Enterprises, Inc.  
 Location: 2701 South Coliseum Boulevard, Fort Wayne, Indiana 46803  
 Permit No.: CP 003-8519-00205  
 Source/Facility: Paint Booth Operation Line - 9 paint booths  
 Pollutant: Volatile Organic Compounds (VOC)  
 Limit: 248.7 tons per year, based on a 365-day period, rolled on a daily basis.  
 First Year Limit: 1,362.7 pounds per day

Month: \_\_\_\_\_ Year: \_\_\_\_\_

Day	Usage this day (ton/day)	Usage for the last 365 - day period	Day	Usage this day (ton/day)	Usage for the last 365 - day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			<b>TOTAL</b>		

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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

Technical Support Document (TSD) for New Construction and Operation

**Source Background and Description**

Source Name:	Elite Enterprises, Inc.
Source Location:	2701 South Coliseum Boulevard, Fort Wayne, Indiana 46803
County:	Allen
Construction Permit No.:	CP-003-8519-00205
SIC Code:	3479
Permit Reviewer:	Dr. T. P. Sinha

The Office of Air Management (OAM) has reviewed an application from Elite Enterprises, Inc. relating to the construction and operation of two (2) natural gas make-up-air heaters, AM1 and AM2, rated at 3.0 million (MM)BTU/hr each, four (4) natural gas make-up-air heaters, AM3, AM4, AM5, and AM6, rated at 1.5 MMBTU/hr each, and a total of nine (9) paint booths including:

- (1) Paint Booths PB1, PB2, PB3, and PB4 (each equipped with a 8,200 acfm exhaust fan) with a maximum capacity of one of the following:

- 120 plastic large end caps / hour,
- 150 plastic air deflectors / hour,
- 104 plastic door trim parts / hour,
- 100 miscellaneous metal parts / hour,

- (2) Paint Booth PB5 (equipped with a 8,200 acfm exhaust fan) with a maximum capacity of one of the following:

- 8 plastic tractor hoods / hour,
- 12 plastic cab shelves / hour,
- 30 metal military parts / hour,
- 10 plastic E/P roofs / hour,
- 12 plastic large end caps / hour,

- (3) Paint Booths PB8, PB9, PB10, and PB11 (each equipped with a 7,300 acfm exhaust fan) with a maximum capacity of one of the following:

- 72 plastic E/P roofs / hour,
- 100 plastic large end caps / hour,

all equipped with high volume low pressure (HVLP) spray gun applications or electrostatic spray equipment and dry filters for air pollution control.

Paint booths PB1 through PB4 are set up like an assembly line operation, where the part moves on a hanging conveyor belt system through each of these booths. Paint booth PB5 is divided into two (2) sections, but vents to the same stack. Paint booths PB8 through PB11 are also set up as an assembly line operation, where the part travels through each booth for coating. Elite

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Enterprises, Inc., coats a variety of plastic and metal parts for the transportation (automotive and trucking), medical, consumer, and building industries.

**History**

On May 2, 1996, Elite Enterprises was issued Construction Permit No. CP 003-4988-00205 for its plastic and metal parts surface coating operation. On April 25, 1996, Elite Enterprises submitted an application to relax the emissions limit of 99 tons per year to 249 tons per year. On the same date, a separate Construction Permit No. CP 003-4393-00205 was issued to Compositives OM, Inc. for a separate fiberglass manufacturing operation. Both of these operations were located at the same site at 2701 South Coliseum Blvd. in Fort Wayne, Indiana and have the same ID. The separate operations were permitted as a single source and separate annual restrictions were established in the two permits such that the total source would be considered a minor source (less than 250 tons per year) under the Prevention of Significant Deterioration (PSD), 326 IAC 2-2, and 40 CFR 52.21 rules. The metal and plastic parts surface coating operation is limited to 99 tons per year.

Due to the business reasons the fiberglass manufacturing plant is being taken out of operation. The source will be operating only at Elite Enterprises, Inc. Elite Enterprises, Inc is requesting to relax the VOC emissions limit from 99 tons per year to 249 tons per year. The VOC potential to emit emissions at 8760 hours of operation at the rated capacity from this source, excluding the emissions from the abandoned portion of the source, is 260 tons per year.

The source has never operated above the PSD threshold limit for VOC or any other pollutants. The source has removed the fiberglass manufacturing operation which has resulted in the VOC emissions from this source to 99 tons per year only. Therefore, by relaxing the VOC federal synthetic minor limit from 99 tons per year to 249 tons per year for Elite Enterprises, will not make the source subject to the Prevention of Significant Deterioration (PSD) review, because it is not becoming a major source by relaxing the limit.

Because the emissions will increase from the same permitted facilities, the attached Construction Permit No. 003-8519 shall supersede Construction Permit No. 003-4988, issued on May 2, 1996.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (scfm)	Temperature (°F)
PB-1	Paint Booth	35	2	8200	70
PB-2	Paint Booth	35	2	8200	70
PB-3	Paint Booth	35	2	8200	70
PB-4	Paint Booth	35	2	8200	70
PB-5	Paint Booth	35	2	8200	70
PB-8	Paint Booth	30	2	7300	70

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PB-9	Paint Booth	30	2	7300	70
PB-10	Paint Booth	30	2	7300	70
PB-11	Paint Booth	30	2	7300	70

**Recommendation**

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

An application for the purposes of this review was received on April 25, 1997, with additional information received on June 9, and July 2, 1997.

**Emissions Calculations**

See Appendix A (Emissions Calculation, nine pages) 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)	58.50	58.50
Particulate Matter (PM10)	58.50	58.50
Sulfur Dioxide (SO <sub>2</sub> )	0.032	0.032
Volatile Organic Compounds (VOC)	260.00	260.00
Carbon Monoxide (CO)	1.1	1.1
Nitrogen Oxides (NO <sub>x</sub> )	5.3	5.3
Single Hazardous Air Pollutant (HAP)	255	255
Combination of HAPs	260	260

- (a) Allowable PM emissions from painting operations are determined from the applicability of rule 326 IAC 6-3 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 allowable emissions of all other pollutants are taken equal to the potential emissions before control, because 326 rules do not provide the allowable limits.

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- (c) Allowable emissions (as defined in the Indiana Rule) of PM, VOC, and PM10, are greater than 25, 25, and 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (d) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

**County Attainment Status**

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen 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 and 40 CFR 52.21.
- (b) Allen County has been classified as attainment or unclassifiable for all 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**

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and limited VOC emissions): Information is taken from CP 003-3524, issued on May 24, 1994.

Pollutant	Emissions (ton/yr)
PM	0.02
PM10	0.02
SO <sub>2</sub>	0.003
VOC	24.0
CO	0.11
NO <sub>x</sub>	0.55

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

**Proposed Modification**

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PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO <sub>2</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO <sub>x</sub> (ton/yr)
Proposed Modification	2.27	2.27	0.032	249	1.1	5.3
PSD Threshold Level	250	250	250	250	50	250

- (a) This modification to an existing minor stationary source is not major because the emissions increases are less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The VOC is limited to 249 tons/yr, therefore, the Prevention of Significant Deterioration (PSD), 326 IAC 2-2, and 40 CFR 52.21, rules do not apply.

Because this source is a PSD synthetic minor, the VOC emissions from the spray booth operation should be monitored and reported in a daily rolling average. The spray booth operation consists of the nine (9) spray booths outlined in this construction permit. The three (3) paint booths reported in the construction permit CP-003-3524, ID-003-00205 issued on May 24, 1994 have been taken out of service; therefore, the three paint booths are not counted as part of the total VOC emissions. In order to determine the VOC limit on the spray booth operation, the VOC emissions from all other facilities must be subtracted from the total VOC limit of 249 tons per year. VOC emissions from all other facilities at Elite including two (2) 3.0 MMBtu/hr natural gas heaters, four (4) 1.5 MMBtu/hr natural gas heaters, and from construction permit CP-003-3524, ID-003-00205 issued on May 24, 1994, one (1) 1.25 MMBtu/hr natural gas fired bake oven, are 0.3 tons per year. Therefore, emissions from the paint booth operation should be limited to 248.7 tons per year.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 application (T 003-7588-00205) on December 13, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

### Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this source.

There are no National Emission Standard for Hazardous Air Pollutants (326 IAC 14) and 40 CFR Part 61, applicable to this source as no hazardous air pollutants covered by this rule, are emitted from these facilities.

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**State Rule Applicability**

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source has potential to emit more than 100 tons/yr of VOC. Pursuant to this rule, the owner/operator of this source must annually submit an emission statement of the source. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations)

The paint booths are subject to 326 IAC 6-3-2 rule. Allowable PM emissions from painting operations are determined from the applicability of rule 326 IAC 6-3 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

The paint booths are controlled by dry filters. Therefore, the paint booths are in compliance with 326 IAC 6-3 rule.

326 IAC 8-1-6 (General provisions relating to VOC rules: general reduction requirements for new facilities)

According to this rule, facilities which have potential VOC emissions of 25 tons or more per year which are not otherwise regulated by other provisions of article 326 IAC 8 shall reduce VOC emissions using best available control technology (BACT). A BACT analysis was performed for the coating of plastic parts using the worst case VOC emissions to identify the best technology available to control VOC emissions taking into consideration the energy, environmental and economical impacts. Based on these criteria, Elite's representative determined that high volume low pressure spray equipment for all first coat applications, and either HVLP or electrostatic equipment for second coat applications provided the best option, which has been accepted as reasonable by the Indiana Office of Air Management. A detailed evaluation of the BACT is included in Appendix A.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

According to this rule, the volatile organic compound (VOC) content of coatings applied to the miscellaneous metal parts shall be limited to 3.5 pounds of VOC per gallon of coating less water delivered to the applicator for the air dried coating applied to the metal parts. 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. The calculations show that the coating used by Elite Enterprises complies with this requirement. See Appendix A for the calculations.

326 IAC 2-1-3.4 (New Source Toxics Control)

These facilities are not new or reconstructed facilities (They were permitted before, and now the

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VOC emissions limit is relaxed to 249 tons/yr from 99 tons/yr). Therefore, New Source Toxics Control for Hazardous Air Pollutants rule is not applicable to this source.

**Air Toxic Emissions**

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

This proposed modification will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows: The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL) developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) does not have at this time any specific statutory or regulatory authority over these substances. The applicant has been notified in writing that the air toxic emissions exceed the major source applicability levels stated by Section 112 of the Clean Air Act Amendments, and that it would be beneficial, both to the applicant and to the public, for the applicant to take steps to reduce or eliminate these air toxic emissions.

Pollutant	Rate (lb/hr)	Max Rate @ 8760 hr/yr (ton/yr)	Modeled Concentration (Fg/m <sup>3</sup> )	OSHA PEL (Fg/m <sup>3</sup> )	% OSHA PEL
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Dibutylphthalate	0.97	4.25	69.9	5000	1.4
Ethylbenzene	1.02	4.47	40.9	435000	0.01
Methyl ethyl ketone	58.12	254.57	2319.4	590000	0.4
Methyl isobutyl ketone	10.88	47.65	434.4	205000	0.21
Toluene	2.14	9.37	85.6	375000	0.023
Xylenes	29.07	127.33	1160.7	435000	0.27
Glycol Ethers	9.32	40.82	370.7	negl	negl

Methodology:

Rate ton/yr = (rate lb/hr)\*(hr/yr of operation)

- (b) The applicant has been notified in writing that the air toxic emissions exceed the major source applicability levels stated by Section 112 of the Clean Air Act Amendments, and that it would be beneficial, both to the applicant and to the public, for the applicant to take steps to reduce or eliminate these air toxic emissions.

### Conclusion

The construction of two (2) natural gas make-up-air heaters rated at 3.0 million (MM)BTU/hr each and four (4) natural gas make-up-air heaters rated at 1.5 MMBTU/hr each, and nine (9) paint booths with high volume low pressure (HVLP) spray applications or electrostatic spray equipment and dry filters as air pollution control will be subject to the conditions of the attached proposed **Construction Permit No. CP-003-8519, PIt ID No. 003-00205.**

APPENDIX A

Emissions Calculations

**Source Background and Description**

Source Name: Elite Enterprises, Inc.  
 Source Location: 2701 South Coliseum Boulevard, Fort Wayne, Indiana 46803  
 County: Allen  
 Construction Permit No.: CP-003-8519-00205  
 SIC Code: 3479  
 Permit Reviewer: Dr. T. P. Sinha

- A) Natural Gas Combustion Emissions - Commercial Boilers - MMBTU/hr at 0.3 to <10:  
 Air Handling Units - two rated at 3.0 MMBTU/hr and four rated at 1.5 MMBTU/hr  
 Total Heat Input Capacity = 12.0 MMBTU/hr  
 Potential Throughput = 105.1 MMCF/yr

	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 ton/yr	0.631	0.631	0.032	5.3	0.28	1.1

**Methodology:**

Emission factors are from AP-42, Compilation of Air Pollutants Emission Factors, Volume 1, Fifth Edition, Chapter 1.4, January 1995, SCC 1-03-006-03.

Pollutant = (2.55 MMBTU/hr) \* (AP-42 lb/MMCF) \* (1 CF/1000 BTU) \* (8760 hr/yr) \*(ton/2000 lb)

Allowable PM Emissions (326 IAC 6-2-1(c)) shall not exceed 0.6 lb PM / MMBTU heat input

**B) Coating Operations:**

Transfer Efficiency = 75%  
 Control Efficiency = 97%

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Material	Density (lb/gal)	Weight Percent Organic	Usage (gal/unit)	Capacity (unit/hr)	VOC (lb VOC/ gal coat)	Potential VOC Emission (ton/yr)	Uncontr ol PM Emiss. (ton/yr)	Control PM Emiss. (ton/yr)
<b>Paint Booths 1-4</b>								
Misc Metal Parts- Topcoat Paint	12.9	27.1	0.02	100.0	3.5	30.66	20.59	0.62
Plastic Air Deflector- Paint	8.4	63.0	0.023	150	5.32	80.39	11.79	0.35
Catalyst	6.7	100.0	0.003	150	6.71	13.23	0.00	0.00
Solvent	7.1	75.0	0.0001	150	5.34	0.35	0.03	0.00
Ready-to- Spray	8.3	67.2	0.026	150	5.54	94.65	11.57	0.35
Door Trim- Ready-to- Spray	10.4	37.0	0.03	104	3.85	52.64	18.56	0.56
Large End Cap- Paint	10.7	37.2	0.032	120	3.99	67.11	28.38	0.85
Catalyst	7.1	90.6	0.016	120	6.46	54.32	1.41	0.042
Ready-to- Spray	9.5	55.0	0.048	120	5.24	132.3	27.09	0.81
Worst Case- PB1-4						132.3	27.09	0.81
<b>Paint Booth 5</b>								
Metal Military Parts- Paint	12.9	28.2	0.023	30	3.64	11.00	6.99	0.21
Catalyst	9.1	15.0	0.006	30	1.37	1.08	1.52	0.046
Solvent	7.3	100.0	0.002	30	7.28	1.91	0.00	0.00
Ready-to- Spray	11.9	29.8	0.03	30	3.53	13.93	8.20	0.25
Tractor Hood- Paint	8.5	56.3	0.044	8	4.77	7.35	1.43	0.043
Catalyst	8.3	64.0	0.010	8	5.33	1.87	0.26	0.008
Solvent	7.2	100.0	0.029	8	7.22	7.34	0.00	0.00
Ready-to- Spray	8.0	72.6	0.083	8	5.82	16.92	1.59	0.048

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Cab Shelf, Primer-	12.9	28.6	0.050	12	3.70	9.72	6.06	0.18
Paint	7.8	39.8	0.012	12	3.10	1.96	0.74	0.022
Catalyst	11.9	30.9	0.062	12	3.67	11.96	6.70	0.20
Ready-to- Spray								
Cab Shelf, Topcoat-	9.8	42.0	0.042	12	4.10	9.05	3.12	0.094
Paint	8.5	51.6	0.010	12	4.40	2.31	0.54	0.016
Catalyst	9.5	43.9	0.052	12	4.18	11.42	3.64	0.11
Ready-to- Spray								
E/P Roof-								
Paint	10.4	45.2	0.017	10	4.70	3.50	1.06	0.032
Catalyst	9.6	40.0	0.004	10	3.83	0.67	0.25	0.008
Solvent	7.3	100.0	0.004	10	7.25	1.27	0.00	0.00
Ready-to- Spray	9.7	53.5	0.024	10	5.20	5.70	1.24	0.037
Large End Caps-								
Paint	10.5	37.2	0.032	12	3.89	6.54	2.77	0.083
Catalyst	7.1	90.6	0.016	12	6.46	5.43	0.14	0.004
Ready-to- Spray	9.5	55.0	0.048	12	5.24	13.23	2.71	0.081
Worst case - PB5						16.92	8.20	0.25
<b>Paint Booths 8-11</b>								
E/P Roof-								
Paint	10.4	45.2	0.017	72	4.70	25.18	7.63	0.23
Catalyst	9.6	40.0	0.004	72	3.83	4.83	1.81	0.054
Solvent	7.3	100.0	0.004	72	7.25	9.15	0.00	0.00
Ready-to- Spray	9.7	53.5	0.025	72	5.20	41.02	8.92	0.27
Large End Cap-								
Paint	10.7	37.2	0.032	100	3.99	55.92	23.65	0.68
Catalyst	7.1	90.6	0.016	100	6.46	45.27	1.17	0.035
Ready-to- Spray	9.5	55.0	0.048	100	5.24	110.25	22.58	0.68
Worst Case- PB8-11						110.25	22.58	0.68
Worst Case- Total						259.47	57.87	1.74

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**Methodology:** Pounds VOC per gal coating, less water = (density, lb/gal) \* (weight % organics) / (1 - volume %water)  
Pounds VOC per gallon coating = (density, lb/gal) \* (weight % organics)  
Pounds VOC per gallon of solids = (density, lb/gal) \* (weight % volatiles) / (volume % solids)  
Potential VOC, ton/yr = (lb VOC/gal coating)\*(gal material, gal/unit)\*(capacity, unit/hr)\*(8760 hr/yr)\*(ton/2000lb)  
Pot Uncont. PM = (dens, lb/gal)\*(1-%wt org)\*(usage, gal/unit)\*(capacity, unit/hr)\*(8760 hr/yr)\*(1 ton/2000 lb)\*(1- transfer efficiency)  
Potential Controlled PM Emissions = (potential uncontrolled PM emissions, ton/yr) \* (1-control efficiency)

### C) Allowable VOC Emissions

Ea = Total Allowable VOC Emissions  
= Natural Gas Emissions + Worst Case Coatings from Spray Paint Lines  
= 0.28 tons per year VOC + 259.47 tons per year VOC  
= 260.0 tons per year

Based on 326 IAC 2-2, a source has to meet the PSD requirements if it meets or exceeds the 250 ton per year. Elite has agreed to accept a total VOC limit of less than 250 tons per year.

### D) BACT Analysis

It has been determined that the plastic parts coating operations are subject to 326 IAC 8-1-6. This rule stipulates that the applicant install and operate the best available control technology (BACT) for these operations. Pursuant to this rule, the applicant has submitted a BACT analysis. This summary first reviews all the options considered, then ranks the feasible options, and finally reviews the costs, environmental concerns, and technical feasibility of each of the options to determine the BACT to be utilized in this operation.

### Initial Review of Options:

1. Solvent/Material Substitution: Use of waterborne coatings, coatings containing nonphotochemically reactive solvents and high solids paint systems were options considered to reduce VOC emissions.

a) Waterborne Coatings - Waterborne solvents are not technically feasible because good adhesion could not be obtained between the plastic part and the waterborne coatings. In addition, these coatings did not have sufficient particle breakup with the resultant finish leaving an "orange peel" appearance. This option is therefore not a viable solution.

b) Nonphotochemically Reactive Solvents - Some of the listed nonphotochemically reactive solvents considered are not used as substitutes in paint and therefore are not feasible. In addition, the nonphotochemically reactive solvents cause other environmental problems, such as stratospheric ozone depletion.

VOC c) High Solids Paint Systems - Although high solids paint systems can reduce the amount of emissions, this type of paint has a slow curing time and has a tendency to cause "orange peeling". Heat can be added to counteract the "orange peeling" and slow curing time; however, the plastic parts coated are intolerant to the high temperatures required. This option therefore is not a viable solution.

2. Transfer Efficiency: The spray equipment used for coating operations depends on the coating to be applied and the part to be coated. Elite proposes to use high volume, low pressure (HVLP) spray equipment for all first coat operations. The use of electrostatic spray equipment is limited

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agent to the second coatings when the geometric configuration allows for it and when non chemical resistant coatings (CART) are used. Electrostatic spray equipment can be effectively used for painting surfaces free from tight corners and crevices. Due to the abrasive properties of CART paints, electrostatic spray equipment cannot be effectively used. CART paint causes premature wear and damage to electrostatic spray equipment; therefore, HVLP applications are preferred for these paints. This option is considered feasible.

3. Add-On Controls: The remaining options discussed below are considered to be add-on controls. These options considered were carbon adsorption, incineration, chemical scrubber, condensation and biofiltration.

a) Carbon Adsorption - Carbon is commonly used as an adsorptive medium to which the air pollutant can adhere. Due to its internal pore structure, activated carbon has significant surface area, giving it a large adsorptive capacity. Adsorption systems are technically feasible and was considered for further evaluation.

b) Incineration - Three types of incineration systems were evaluated for use at this facility. These are a catalytic system, a concentrator system with an oxidizer, and a regenerative thermal oxidizer system (RTO).

(1) Catalytic - The catalytic incinerator without a concentrator requires approximately 10 times more fuel. Therefore, this option was only considered when combined with a concentrator.

(2) Concentrator - Concentrators combine the features of an adsorption and incineration system. Concentrators are sold as pretreatment systems for oxidizers. These systems involve adsorbing the VOCs from a large volume air stream onto a bed of activated carbon or zeolite and then desorbing the VOCs from the bed with a small volume of hot air. The concentrated air stream is then incinerated. Carbon and zeolite concentrator treatment systems are technically feasible and were considered for further evaluation.

(3) Regenerative Thermal Oxidizer - RTOs recover up to 95 percent of the heat generated during the oxidation process. There are several problems with the operation of these systems such as the requirement to maintain a constant waste stream flow rate. Due to these constant changes, the energy demands of the oxidizer are frequently changing, thus greatly increasing the operating costs of the oxidizer systems beyond budget estimates. In spite of this problem, this option is considered technically feasible for this operation and were considered for further evaluation.

c) Chemical Scrubber - This system is an absorption system in which the waste stream is dissolved in a solvent. Because the waste streams at Elite contain varied components, numerous solvents are required to capture each target chemical thus making this option not feasible. This option was not considered for further evaluation.

d) Condensation - Condensation systems refrigerate the waste stream to condense the gases. The condensate is then collected and reused on-site or treated as a waste. This system is highly efficient (95% or greater) for streams with high concentrations of vapors. The concentrations in Elite's waste streams are relatively low; therefore, the use of a condensation system is not a viable option. In addition, the condensate from Elite's waste streams would contain a variety of chemicals and would not be suitable for reuse on-site. This option was not considered for further evaluation.

e) Biofiltration - There is no known application of biofiltration for the removal of VOCs from the spray operations at this source. Therefore, this option was not considered for further evaluation.

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### Ranks of Feasible Options:

1. "Top"	Regenerative Thermal Oxidation 98% VOC Destructive Efficiency	234 tons/yr VOC removed
2. "3"	Zeolite Concentrator with Oxidizer 96.4% VOC Destructive Efficiency	231 tons/yr VOC removed
3. "2"	Carbon Concentrator with Oxidizer 95% VOC Destructive Efficiency	227 tons/yr VOC removed
4. "Bottom"	High Volume, Low Pressure (HVLP) Equipment	0 tons/yr VOC removed

### Discussion of Each Option:

#### 1. "Top" Option - Regenerative Thermal Oxidation

##### a) Economic Effects

(1) Annual costs:	\$699,576
(2) Annual cost / ton VOC controlled:	\$2,590
(3) Annual cost as fraction of gross sales:	n/a
(4) Annual cost as fraction of gross profit:	Confidential
(5) Annual cost as fraction of book value:	n/a

##### b) Environmental Effects

(1) Tons NO <sub>x</sub> / ton VOC controlled:	0.015 tons NO <sub>x</sub> / ton VOC
(2) Tons CO / ton VOC controlled:	n/a tons CO / ton VOC
(3) Tons PM / ton VOC controlled:	n/a tons PM / ton VOC
(4) Tons SO <sub>2</sub> / ton VOC controlled:	n/a tons SO <sub>2</sub> / ton VOC
(5) Discharge to water generated by control technology:	none
(6) Solid wastes generated by control technology:	none

##### c) Energy Effects

(1) Additional natural gas used by control technology:	70.9 MMCF / yr
(2) Additional fuel oil used by control technology:	0 kgal / yr
(3) Additional electricity consumed by control technology:	607,751 kWh / yr
(4) Heat used by control technology:	318 MMBtu / ton VOC
(5) Electricity used by control technology:	2,597 kWh / ton VOC

(NO<sub>x</sub>). d) Technical Feasibility - RTO's recover up to 95% of the heat generated during the oxidation process. There are several problems noted with the operation of these systems, such as the requirement to maintain a constant waste stream flow rate and reported maintenance problems with higher than expected costs being incurred. Due to the intermittent concentration of VOC emissions in the waste stream, additional energy in the form of natural gas would be required to maintain the temperature necessary for destruction of the VOCs. This energy consumption would use a limited natural resource and result in increased emissions of nitrogen oxides. Additional electricity would be required to run these control devices, adding to the energy demands of the generating facility.

e) The annualized cost per ton of VOC removed, is a reasonable \$2,590, but this represents an excessive amount of profits when averaged over the next five years. This option would also require additional fuel usage and the associated environmental effects. Therefore, this option is deemed infeasible due to economic factors.

## 2. Option - Carbon Concentrator with Oxidizer

## a) Economic Effects

(1) Annual costs:	\$364,330
(2) Annual cost / ton VOC controlled:	\$1,577
(3) Annual cost as fraction of gross sales:	n/a
(4) Annual cost as fraction of gross profit:	Confidential
(5) Annual cost as fraction of book value:	n/a

## b) Environmental Effects

(1) Tons NOx / ton VOC controlled:	0.002 tons NOx / ton VOC
(2) Tons CO / ton VOC controlled:	n/a tons CO / ton VOC
(3) Tons PM / ton VOC controlled:	n/a tons PM / ton VOC
(4) Tons SO <sub>2</sub> / ton VOC controlled:	n/a tons SO <sub>2</sub> / ton VOC
(5) Discharge to water generated by control technology:	none
(6) Solid wastes generated by control technology:	none

## c) Energy Effects

(1) Additional natural gas used by control technology:	7.0 MMCF / yr
(2) Additional fuel oil used by control technology:	0 kgal / yr
(3) Additional electricity consumed by control technology:	2,646,659 kWh / yr
(4) Heat used by control technology:	31.8 MMBtu / ton VOC
(5) Electricity used by control technology:	11,457 kWh / ton VOC

d) Technical Feasibility - The carbon concentrator involves adsorbing the VOCs from a large volume air stream onto a bed of activated carbon, then desorbing the VOCs from the bed with a small volume of hot air. This small concentrated air stream is incinerated.

e) The annualized cost per ton of VOC removed, is a reasonable \$1,577, but this represents an excessive amount of profits when averaged over the next five years. This option would also require additional fuel usage and the associated environmental effects. Therefore, this option is deemed infeasible due to economic factors.

## 3. Third Option - Zeolite Concentrator with Oxidizer

## a) Economic Effects

(1) Annual costs:	\$328,050
(2) Annual cost / ton VOC controlled:	\$1,445
(3) Annual cost as fraction of gross sales:	n/a
(4) Annual cost as fraction of gross profit:	Confidential
(5) Annual cost as fraction of book value:	n/a

## b) Environmental Effects

(1) Tons NOx / ton VOC controlled:	0.003 tons NOx / ton VOC
(2) Tons CO / ton VOC controlled:	n/a tons CO / ton VOC
(3) Tons PM / ton VOC controlled:	n/a tons PM / ton VOC
(4) Tons SO <sub>2</sub> / ton VOC controlled:	n/a tons SO <sub>2</sub> / ton VOC
(5) Discharge to water generated by control technology:	none
(6) Solid wastes generated by control technology:	none

## c) Energy Effects

(1) Additional natural gas used by control technology:	18.4 MMCF / yr
(2) Additional fuel oil used by control technology:	0 kgal / yr

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- |  |                      |
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| (3) Additional electricity consumed by control technology: | 607,751 kWh / yr     |
| (4) Heat used by control technology:                       | 85.3 MMBtu / ton VOC |
| (5) Electricity used by control technology:                | 2,677 kWh / ton VOC  |

- d) Technical Feasibility - The Zeolite concentrator works similarly to a carbon concentrator, but unlike carbon, can withstand temperatures up to 1,800°F which is hot enough to burn off the a greater variety of VOCs. Zeolite is an inorganic compound consisting mainly of SiO<sub>2</sub> which has a large internal pore structure giving it the required large adsorption surface. The concentrated VOCs are desorbed from the Zeolite bed with a small volume of hot air. This small concentrated air stream is incinerated.
- e) The annualized cost per ton of VOC removed, is a reasonable \$1,444, but this represents an excessive amount of profits when averaged over the next five years. This option would also require additional fuel usage and the associated environmental effects. Therefore, this option is deemed infeasible due to economic factors.

#### 4. "Bottom" Option - High Volume, Low Pressure (HVLP) Equipment

##### a) Economic Effects

- |  |     |
|--|-----|
| (1) Annual costs:                            | \$0 |
| (2) Annual cost / ton VOC controlled:        | \$0 |
| (3) Annual cost as fraction of gross sales:  | \$0 |
| (4) Annual cost as fraction of gross profit: | \$0 |
| (5) Annual cost as fraction of book value:   | \$0 |

##### b) Environmental Effects

- |   |                                  |
|---|----------------------------------|
| (1) Tons NO <sub>x</sub> / ton VOC controlled:          | 0 tons NO <sub>x</sub> / ton VOC |
| (2) Tons CO / ton VOC controlled:                       | 0 tons CO / ton VOC              |
| (3) Tons PM / ton VOC controlled:                       | 0 tons PM / ton VOC              |
| (4) Tons SO <sub>2</sub> / ton VOC controlled:          | 0 tons SO <sub>2</sub> / ton VOC |
| (5) Discharge to water generated by control technology: | none                             |
| (6) Solid wastes generated by control technology:       | none                             |

##### c) Energy Effects

- |  |                   |
|--|-------------------|
| (1) Additional natural gas used by control technology:     | 0 MMCF / yr       |
| (2) Additional fuel oil used by control technology:        | 0 kgal / yr       |
| (3) Additional electricity consumed by control technology: | 0 kWh / yr        |
| (4) Heat used by control technology:                       | 0 MMBtu / ton VOC |
| (5) Electricity used by control technology:                | 0 kWh / ton VOC   |

- d) Technical Feasibility - The HVLP spray applicators are widely used. These spray guns have a transfer efficiency of 75%. This efficiency is superior to air atomization, which has a transfer efficiency of only 50%.

This proposed technology does not involve installation of add on VOC emission control equipment. Hence, there would be no collateral energy or environmental impacts.

#### Best Available Control Technology Determination:

The excessive costs of control, compared to the projections of profit over the next five years, eliminate the add on control options from consideration. Coatings that reduce VOC emissions including waterborne coatings, nonphotochemically reactive solvents and high solids paint, are not feasible options because of the low coating quality of the finished product. Therefore, BACT in this case is determined to consist of the high volume low pressure (HVLP) spray applicators, satisfying the requirements of 326 IAC 8-1-6.

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SUMMARY OF EMISSIONS (ton/yr)					
Pollutant	Nat'l Gas Units 0.3-10 MMBTU/hr	Surface Coat Booths 1-4 Worst Case	Surface Coat Booth 5 Worst Case	Surface Coat Booths 8-11 Worst Case	Uncontrolled Emissions
PM =PM10	0.631	27.09	8.20	22.6	58.5
SO2	0.032	0	0	0	0.032
NOx	5.3	0	0	0	5.3
VOC	0.28	132.0	16.9	110.0	250.0
CO	1.1	0	0	0	1.1
Pollutant	Nat'l Gas Units 0.3-10 MMBTU/hr	Surface Coat Booths 1-4 Worst Case	Surface Coat Booth 5 Worst Case	Surface Coat Booths 8-11 Worst Case	Controlled Emissions
PM =PM10	0.631	0.81	0.25	0.68	2.37
SO2	0.032	0	0	0	0.032
NOx	5.3	0	0	0	5.3
VOC	0.28	132	16.9	110.0	260.0
CO	1.1	0	0	0	1.1
Pollutant	Nat'l Gas Units 0.3-10 MMBTU/hr	Surface Coat Booths 1-4 Worst Case	Surface Coat Booth 5 Worst Case	Surface Coat Booths 8-11 Worst Case	Allowable Emissions
PM =PM10	0.631	27.1	8.20	22.6	58.50
SO2	0.032	0	0	0	0.032
NOx	5.3	0	0	0	5.3
VOC	0.28	132	16.9	110.0	249.0*
CO	1.1	0	0	0	1.1

\* Accepted limit of 249 tons per year to avoid PSD review.

## Indiana Department of Environmental Management Office of Air Management

### Addendum to the Technical Support Document for New Construction and Operation

Source Name: Elite Enterprises, Inc.  
Source Location: 2701 South Coliseum Boulevard, Fort Wayne, Indiana 46803  
County: Allen  
Construction Permit No.: CP-003-8519-00205  
SIC Code: 3479  
Permit Reviewer: Dr. T. P. Sinha

On August 19, 1997, the Office of Air Management (OAM) had a notice published in the The Fort Wayne Journal Gazette, Fort Wayne, Indiana, stating that Elite Enterprises, Inc. had applied for a construction permit to construct and operate two (2) natural gas make-up-air heaters, AM1 and AM2, rated at 3.0 million (MM)BTU/hr each, four (4) natural gas make-up-air heaters, AM3, AM4, AM5, and AM6, rated at 1.5 MMBTU/hr each, and a total of nine (9) paint booths all equipped with high volume low pressure (HVLP) spray gun applications or electrostatic spray equipment and dry filters for air pollution control.

The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

No comments on the proposed construction permit were received from the company or the public.

The OAM has determined that the following correction is necessary:

1. The first page of Construction Permit

Proposed

Construction Permit No.: CP-003-8519-00000

Final permit

Construction Permit No.: CP-003-8519-00205