

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**GenCorp, Inc.
1 General Street
Wabash, IN 46992**

is hereby authorized to construct

a modification of an existing automotive parts production facility, consisting of the following equipment:

- (a) one (1) plastic parts adhesive application station using a brush application system with two (2) electric IR ovens identified as emission unit EU-13, with a maximum rated capacity of coating 270 ft² of plastic products/hr. exhausting through stacks F2-45, F2-46 and F2-47.

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-169-9774-00004	
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 2-7-19 (Fees).
 - (e) The Permittee has submitted their Part 70 permit (T-169-5650-00004) on April 1, 1996 for the existing source. The equipment being reviewed under this permit shall 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 this automotive parts production facility 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 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
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 January 1 and ending December 31.

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.

Fugitive Dust Emissions

9. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

BACT Synthetic Minor Limitation

10. That input of volatile organic compounds (VOC), including clean up solvent, minus the VOC solvent shipped out, delivered to the applicators of the adhesive application station shall be limited to 24 tons per year, based on a twelve (12) consecutive month period, rolled on a monthly basis, therefore, 326 IAC 8-1-6 will not apply.

MACT Synthetic Minor Limitation

11. That input of single and total hazardous air pollutants (HAP), including clean up solvent, minus the HAP solvent shipped out, delivered to the applicators of the adhesive application station shall be limited to 9.90 and 24 tons per year, respectively, based on a twelve (12) consecutive month period, rolled on a monthly basis, therefore, 326 IAC 2-1-3.4 will not apply.

Open Burning

12. That 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.

Emergency Reduction Plans

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within 180 calendar days from the date on which this source commences operation

(c) 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.

(d) 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.

(e) 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.

(f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Reporting Requirements

14. 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 made available upon request to the Office of Air Management (OAM).

- (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 reports shall include limiting VOC usage to 24 tons per year, limiting single HAP usage to 9.90 tons per year and limiting total HAPs to 24 tons per year. 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 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.

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

Quarterly Report

Company Name: GenCorp, Inc.
Location: 1 General Street Wabash, IN 46992
Permit No.: 169-9774-00004
Source: automotive parts production facility
Pollutant: total hazardous air pollutant (HAP)
Limit: The total HAP usage at the surface coating facility shall be limited to 24 tons per twelve (12) month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Total HAP Usage This Month	Total HAP Usage Previous 11 Months	Total HAP Usage 12 Month Total
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

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

Quarterly Report

Company Name: GenCorp, Inc.
Location: 1 General Street Wabash, IN 46992
Permit No.: 169-9774-00004
Source: automotive parts production facility
Pollutant: single hazardous air pollutant (HAP)
Limit: The single HAP usage at the surface coating facility shall be limited to 9.90 tons per twelve (12) month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Single HAP Usage This Month	Single HAP Usage Previous 11 Months	Single HAP Usage 12 Month Total
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

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

Quarterly Report

Company Name: GenCorp, Inc.
Location: 1 General Street Wabash, IN 46992
Permit No.: 169-9774-00004
Source: automotive parts production facility
Pollutant: volatile organic compounds (VOC)
Limit: The VOC usage at the automotive parts production facility shall be limited to 24 tons per twelve (12) month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Usage This Month	VOC Usage Previous 11 Months	VOC Usage 12 Month Total
Month 1			
Month 2			
Month 3			

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: GenCorp, Inc.
 Source Location: 1 General Street, Wabash, IN 46992
 County: Wabash
 Construction Permit No.: CP-169-9774-00004
 SIC Code: 3089
 Permit Reviewer: Yvette de los Angeles/EVP

The Office of Air Management (OAM) has reviewed an application from GenCorp, Inc. relating to the construction and operation of a modification of an existing automotive parts production facility, consisting of the following equipment:

- (a) one (1) plastic parts adhesive application station using a brush application system with two (2) electric IR ovens identified as emission unit EU-13, with a maximum rated capacity of coating 270 ft² of plastic products/hr. exhausting through stacks F2-45, F2-46 and F2-47.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (cfm)	Temperature (°F)
F2-45	surface coating operation	27	1.5	5300	100
F2-46	surface coating operation	27	0.83	1500	300
F2-47	surface coating operation	27	0.83	1500	300

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 May 15, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (2 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)	---	0.00
Particulate Matter (PM10)	---	0.00
Sulfur Dioxide (SO ₂)	NA	NA
Volatile Organic Compounds (VOC)	---	37.64
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO _x)	NA	NA
Single Hazardous Air Pollutant (HAP)	---	23.42
Combination of HAPs	---	31.79

- (a) The potential emissions before controls are used for the permitting determination.
- (b) Allowable emissions (as defined in the Indiana Rule) of VOC is greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (c) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and/or 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 (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Wabash 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) Wabash County has been classified as attainment or unclassifiable for all 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.
- (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

Existing Source Part 70 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	130.48
PM10	130.48
SO ₂	0.30
VOC	193.57
CO	18.78
NO _x	76.07
Single HAP	0.00
Combination HAPs	0.00

- (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.
- (b) These emissions were based on the Part 70 application submitted by the company.

Proposed Modification

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 ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	0.00	0.00	0.00	15.91	0.00	0.00
PSD Threshold Level	250	250	250	250	250	250

- (a) This modification to an existing minor stationary source is not major because the emission increase is 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 less than 25 tons/yr, therefore, 326 IAC 8-1-6 requirements do not apply. The worst case single HAP and total HAPs are limited to less than 10 and 25 tons/yr, respectively (see page 2 of Appendix A for detailed calculations), therefore, 326 IAC 2-1-3.4 requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted its Part 70 (T-169-5650-00004) application on April 1, 1996. 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 63 applicable to this facility.

There are no National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, applicable to this source.

State Rule Applicability

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

326 IAC 2-1-3.4 applies to new or reconstructed facilities with potential emissions of any single HAP equal or greater than ten (10) tons per year and potential emissions of a combination of HAPs greater than or equal to twenty-five (25) tons per year. Since this modification will limit any single HAP to less than ten (10) tons per year and will limit a combination of HAPs to less than twenty-five (25) tons per year, the requirements of 326 IAC 2-1-3.4 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 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 July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

New facilities, which have potential emission of 25 tons or more per year shall reduce VOC emissions using best available control technology (BACT). Since this source will limit VOC usage for this modification to less than 25 tons per year, the requirements of 326 IAC 8-1-6 do not apply.

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 modification 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.

Conclusion

The construction of this plastic parts application station will be subject to the conditions of the attached proposed **Construction Permit No. CP-169-9774-00004**.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

GenCorp, Inc.
1 General Street
Wabash, IN 46992

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that GenCorp, Inc., 1 General Street, Wabash, Indiana, 46992, has constructed the adhesive application station in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on May 15, 1998 and as permitted pursuant to **Construction Permit No. CP-169-9774, Plant ID No. 169-00004** issued on _____.
5. I hereby certify that GenCorp, Inc. is now subject to the Title V program and has submitted a Title V operating permit application on April 1, 1996 .

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 19 _____ .

My Commission expires: _____

Signature

Name (typed or printed)

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

Company Name: GenCorp, Inc.
Address City IN Zip: 1 General Street, Wabash, IN 46992
CP: 169-9774
Plt ID: 169-00004
Reviewer: Yvette de los Angeles
Date: June 24, 1998

Potential Emissions (uncontrolled):																						
Material (as applied)	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/ft²)	Maximum (ft²/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						
Flock-Lok Mix	7.58	74.99%	0.00%	74.99%	0.00%	25.00%	0.00560	270.00	5.68	5.68	8.59	206.27	37.64	0.00	22.74	100.00%						
Total Potential Emissions:											8.59	206.27	37.64	0.00								
Limited Potential Emissions (controlled):																						
											<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Material Usage Limitation* VOC</th> <th>Limited VOC lbs per Hour</th> <th>Limited VOC lbs per Day</th> <th>Limited VOC tons per Year</th> </tr> </thead> <tbody> <tr> <td align="center">42.27%</td> <td align="center">3.63</td> <td align="center">87.19</td> <td align="center">15.91</td> </tr> </tbody> </table>				Material Usage Limitation* VOC	Limited VOC lbs per Hour	Limited VOC lbs per Day	Limited VOC tons per Year	42.27%	3.63	87.19	15.91
Material Usage Limitation* VOC	Limited VOC lbs per Hour	Limited VOC lbs per Day	Limited VOC tons per Year																			
42.27%	3.63	87.19	15.91																			
Total Limited Potential Emissions:																						

* To limit the worst case single HAP to 9.90 tons per year, the VOC usage is limited to 42.27% of the potential uncontrolled emissions.

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) * Transfer Efficiency

**HAP Emission Calculations
From Surface Coating Operations**

Company Name: GenCorp, Inc.
Plant Location: 1 General Street, Wabash, IN 46992
CP: 169-9774
Pit ID: 169-00004
Reviewer: Yvette de los Angeles
Date: June 24, 1998

State Potential Emissions (uncontrolled):												
Material	Density (Lb/Gal)	Gal of Mat (gal/ft^2)	Maximum (ft^2/hour)	Weight % Xylene	Weight % TDI	Weight % MEK	Weight % Ethyl Benzene	Xylene Emissions (ton/yr)	TDI Emissions (ton/yr)	MEK Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	TOTAL HAP EMISSIONS (ton/yr)
Flock-Lok Mix	7.58	0.00560	270.00	13.33%	0.00%	46.66%	3.33%	6.69	0.00	23.42	1.67	31.79
Total Potential Emissions:								6.69	0.00	23.42	1.67	31.79
Limited Potential Emissions (controlled):												
						Limited Adhesive Usage *	Limited Xylene Emissions (ton/year)	Limited Toluene Emissions (ton/year)	Limited MEK Emissions ** (ton/year)	Limited Ethyl Benzene (ton/year)	LIMITED HAP EMISSIONS (ton/year)	
Total Limited Potential Emissions						42.27%	2.83	0.00	9.90	0.71	13.43	
<p>* The potential single HAP usage will be limited to 9.90 tons per year to avoid 326 IAC 2-1-3.4 (MACT). This equates to a 42.27% adhesive usage limitation [9.90/23.42 = 0.4227 = 42.27%]</p> <p>** The source will limit the single HAP usage to 9.90 tons per 12 consecutive month to avoid the requirements of 326 IAC 2-1-3.4 (MACT).</p>												

METHODOLOGY

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