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Facility Name: **Caterpillar Inc.**

Application Number: **03-0723**

Date: **January 27, 1999**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as

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an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Caterpillar Inc.** located in **Marion** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>
K001	spray booth for coating miscellaneous metal parts
K001 cont'd	

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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BAT
Determination

Compliance
with
the terms and
conditions of
this permit
and
Ohio EPA's Air
Toxics Policy

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
	Applicable Federal & OAC Rules	3745-21-09 (U) (2) (e)	Permit Allowable Mass Emissions and/or Control/Usage Requirements	0% opacity as a 6-minute average coating usage not to exceed 10 gal/day
3745-31-05		3745-17-07 (A)	4.1 lbs Volatile Organic Compounds (VOC)/hr, 41.0 lbs VOC/day, 7.48 TPY VOC from application of coating	(*)
		3745-17-11 (B) (2)	20.1 lbs VOC/month, 0.12 TPY VOC from application of cleanup materials	(**)
			7.60 TPY VOC from coating and cleanup materials	
			0.011 lb Particulate emissions (PE)/hr, 0.02 TPY PE	

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- * The emissions limitations based on this applicable rule are less stringent than the limitations established pursuant to OAC Rule 3745-31-05.
- ** The emissions limitations based on this rule are not applicable because the facility is not in a Priority I county and its UMRE is less than 10 lbs/day.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
VOC	7.60
PE	0.02

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering

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materials specified by the permittee in the PTI number 03-10723 for this emissions unit. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the organic compound emission limitations specified in this permit were established in accordance with the Ohio EPA's "Air Toxics Policy" and are based on both the coating and cleanup material formulation data and the design parameters of the emissions unit's exhaust system, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for each pollutant based on the SCREEN 3.0 model and a comparison of the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

K001

Pollutant: 2-Butoxyethanol

TLV (ug/m3): 121,000

Maximum Hourly Emission Rate (lbs/hr): 4.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 125.5

MAGLC (ug/m3): 2881

As long as the application of the "Air Toxics Policy" continues to show compliance with the applicable MAGLC, the permittee may implement any of the following changes with prior notification to and approval from the Northwest District Office:

- a. any changes in the composition of the coatings or cleanup materials, or the use of new coatings or cleanup materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent

version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table;

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- b. any change to the emissions unit or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height);
- c. any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)]; and,
- d. any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in an increase in emissions of any "Hazardous Air Pollutants" as defined in OAC rule 3745-77-01(V).

For any change to the emissions unit or its method of operation that would either require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a permit to install prior to the change.

2. The permittee shall operate the dry filtration system whenever this emissions unit is in operation.
3. Coating usage shall not exceed 10 gallons per day.

C. MONITORING AND/OR RECORD KEEPING REQUIREMENTS

1. The permittee shall collect and record the following information each day for emissions unit K001:
 - a. the name and identification number of each coating employed;
 - b. the VOC content of each coating, in pounds per gallon, as applied;
 - c. the volume, in gallons, of each coating employed;

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- d. the total volume, in gallons, of all of the coatings employed; and,
 - e. the total VOC emission rate from all coatings employed, in pounds per day;
2. The permittee shall collect and record monthly the following information for emissions unit K001:
 - a. the name and identification of each coating/cleanup material employed;
 - b. the VOC content of each cleanup material, in pounds per gallon;
 - c. the number of gallons of each cleanup material employed;
 - d. the total VOC emission rate from all cleanup materials employed, in pounds or tons per month;
 - e. the total VOC emission rate from all coating materials employed, in pounds or tons per year, for the calendar year-to-date;
 - f. the total VOC emission rate from all cleanup materials employed, in pounds or tons per year, for the calendar year-to-date; and,
 - g. the total VOC emission rate from all coating and cleanup materials employed, in pounds or tons per year, for the calendar year-to-date.
 3. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

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D. REPORTING REQUIREMENTS

1. The permittee shall notify the Director (Northwest District Office) in writing of any daily record showing that the coating line employs more than the applicable maximum daily coating usage limit. The notification shall include a copy of such record and shall be sent to the Director (Northwest District Office) within 45 days after the exceedance occurs.
2. The permittee shall submit annual written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Northwest District Office. If no deviations occurred during a calendar annual, the permittee shall submit an annual report, which states that no deviations occurred during that quarter. The reports shall be submitted annually, i.e., by January 31 of each year and shall cover the previous calendar year. (These annual reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

E. TESTING REQUIREMENTS/COMPLIANCE METHODS DETERMINATION

1. Compliance with the emission limitations listed in the Air Emission Summary of this PTI for emission unit K001 shall be determined in accordance with the following methods:

a. Emission Limitation: 4.1 lbs VOC/hr from all coating materials

Applicable Compliance Method: The hourly VOC limits for coatings are based on the emission unit's potential to emit. Therefore, no daily record keeping, deviation reporting, or compliance method calculations are required to demonstrate

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compliance with these limits. The allowable emissions limit is based on the following: the maximum usage of 1 gal/hr x a maximum VOC content of 4.1 lbs/gal.

- b. Emission Limitations: 41.00 lbs VOC/day, 7.48 TPY
TPY
VOC from all coating materials

Applicable Compliance Method: The record keeping requirements in the Monitoring and/or Record keeping section of this permit shall be used to determine compliance with the above limits.

- c. Emission Limitations: 20.1 lbs VOC/month, 0.12 TPY
VOC from all cleanup materials

Applicable Compliance Method: The record keeping requirements in the Monitoring and/or Record keeping section of this permit shall be used to determine compliance with the above limits.

- d. Emission Limitation: 7.60 TPY VOC from all coating and cleanup materials

Applicable Compliance Method: The record keeping requirements in the Monitoring and/or Record keeping section of this permit shall be used to determine compliance with the above limits.

- e. Emission Limitation: 0.011 lb PE/hr, 0.02 TPY
PE

Applicable Compliance Method: To determine the actual worst case particulate rate (E), the following equation shall be used for the paint spraying operations:

$E = \text{particulate matter emissions rate (lbs/hr)}$

$E = \text{maximum coating solids usage rate in pounds per hour} \times (1-TE) \times (1-CE)$

TE = transfer efficiency, which is the ratio of

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the amount of coating solids deposited on the coated part to the amount of coating solids used (assumed to be 98%)

CE = control efficiency of the control equipment (assumed to be 90%)

Compliance with the TPY emissions limit will be assumed as long as the emissions unit is in compliance with the lb/hr emissions limit and the gal/day operational restriction.

If required, the permittee shall demonstrate compliance with the above emissions limit pursuant to 40 CFR Part 60 Appendix A, Method 5.

- f. Emission Limitation: 0% opacity as a six minute average

Applicable Compliance Method: 40 CFR Part 60 Appendix A, Method 9

- g. Emission Limitations: Coating usage not to exceed 10 gal/day

Applicable Compliance Method: The record keeping requirements in the Monitoring and/or Record keeping section of this permit shall be used to determine compliance with the above limits.

F. MISCELLANEOUS REQUIREMENTS

None.