



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL  
BUTLER COUNTY**

Street Address:  
50 West Town Street, Suite 700

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:  
Lazarus Gov. Center  
P.O. Box 1049

**Application No: 14-05996**

**Fac ID: 1409030600**

**DATE: 12/11/2007**

BAE Systems  
Dan Stapleton  
9113 Le Saint Drive  
Fairfield, OH 45014

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

HCDES



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**Permit To Install  
Terms and Conditions**

**Issue Date: 12/11/2007  
Effective Date: 12/11/2007**

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**FINAL PERMIT TO INSTALL 14-05996**

Application Number: 14-05996  
Facility ID: 1409030600  
Permit Fee: **\$600**  
Name of Facility: BAE Systems  
Person to Contact: Dan Stapleton  
Address: 9113 Le Saint Drive  
Fairfield, OH 45014

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**9113 Le Saint Drive  
Fairfield, Ohio**

Description of proposed emissions unit(s):  
**Modification to existing permits for emissions units K007, K008, and K009 to allow for coating equipment of a different size and which require different coatings.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

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Chris Korleski  
Director

## **Part I - GENERAL TERMS AND CONDITIONS**

### **A. Permit to Install General Terms and Conditions**

#### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly 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 appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### **3. Records Retention Requirements**

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 for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### **4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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**PTI Application: 14-05996**  
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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

**9. Construction of New Sources(s)**

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The proposed emissions unit(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 cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(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 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 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 the requirements of this permit or cannot meet applicable standards.

#### **10. 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.

#### **11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

#### **12. 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.

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**13. Source Operation and Operating Permit Requirements 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, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	93.39

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (K007) - Paint Spray Booth - Modification**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.</p> <p>VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).</p> <p>See terms and conditions A.2.a, A.2.b, A.2.d, B.1 and B.2.</p>

**2. Additional Terms and Conditions**

- 2.a The VOC content of any coating employed in this emissions unit shall not exceed 3.24 pounds of VOC per gallon of coating, as applied.
- 2.b The VOC content of any cleanup material employed in this emissions unit shall not exceed 3.25 pounds of VOC per gallon of cleanup material, as applied.
- 2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.
- 2.d The daily VOC emission limitation outlined above is based on the emission unit's potential to emit. Therefore, no daily records are required to demonstrate compliance with this limit.

**B. Operational Restrictions**

1. The maximum amount of coating employed in this emission unit shall not exceed 66.0 gallons per day and 24,090 gallons per year.

**Issued: 12/11/2007**

2. The maximum amount of cleanup material employed in this emission unit shall not exceed 547.5 gallons per year.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following:
  - a. the company identification of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the volatile organic compound (VOC) content of each coating and cleanup material employed, in pounds per gallon, as applied;
  - d. the VOC emissions from each coating and cleanup material employed, i.e., (b)x(c), in pounds;
  - e. the total VOC emissions from this emissions unit, i.e., the sum of (d) for all coatings and cleanup materials employed, in pounds; and
  - f. the total gallons of all coatings and cleanup materials employed.
2. The permittee shall total the monthly records of the coating and cleanup usage, in gallons, at the end of each calendar year.
3. The permittee shall total the monthly records of the VOC emissions at the end of each calendar year.
4. The permit to install for emission units K007, K008 and K009 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant emitted at over a ton per year using the SCREEN3 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the use of the SCREEN3 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant:

Emissions Unit ID: **K007**

Pollutant: Ethylene glycol butyl ether

TLV (ug/m3): 96,660

Maximum Hourly Emission Rate (lbs/hr): 0.73

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 43

MAGLC (ug/m3): 2301

The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(d), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

#### **D. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing an exceedance of the coating and/or cleanup material usage limitation, the daily VOC emissions limitation, or the VOC content limitation. A copy of such record shall be sent to the Director within 45 days after the exceedance occurs.

Emissions Unit ID: **K007**

2. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services which specify the total VOC emissions and the total coating and cleanup material usages from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

#### **E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.

VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).

Applicable Compliance Method:

The maximum daily VOC emissions rate shall be calculated by the following equation using the information submitted by the permittee in PTI Application 14-05996, submitted on October 23, 2007: Sum of [(maximum usage of each coating, in gallons per day) x (as applied VOC content of coating, in pounds per gallon)] for all coatings.

The actual annual VOC emission rate shall be demonstrated by the sum of all monthly VOC emissions for the calendar year based on the record keeping required by term and condition C.1.

2. Compliance with the VOC content limitations for the coatings and cleanup materials cited in terms and conditions A.2.a and A.2.b shall be demonstrated by the record keeping in term and condition C.1.
3. Formulation data or USEPA methods 24 or 24A shall be used to determine the VOC content for coatings and cleanup materials.
4. Compliance with the coating and cleanup material usage limitations cited in sections B.1 and B.2 shall be demonstrated by the record keeping in sections C.1 - C.3.

#### **F. Miscellaneous Requirements**

**Issued: 12/11/2007**

1. The terms and conditions of this air permit to install shall supersede the terms and conditions of permit to install 14-05524, as issued on January 29, 2004 and modified permit to install 14-05524, as issued on August 12, 2004.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (K008) - Paint Spray Booth - Modification**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.  VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).  See terms and conditions A.2.a, A.2.b, A.2.d, B.1 and B.2.

**2. Additional Terms and Conditions**

- 2.a The VOC content of any coating employed in this emissions unit shall not exceed 3.24 pounds of VOC per gallon of coating, as applied.
- 2.b The VOC content of any cleanup material employed in this emissions unit shall not exceed 3.25 pounds of VOC per gallon of cleanup material, as applied.
- 2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.
- 2.d The daily VOC emission limitation outlined above is based on the emission unit's potential to emit. Therefore, no daily records are required to demonstrate compliance with this limit.

**B. Operational Restrictions**

1. The maximum amount of coating employed in this emission unit shall not exceed 66.0 gallons per day and 24,090 gallons per year.

**Issued: 12/11/2007**

2. The maximum amount of cleanup material employed in this emission unit shall not exceed 547.5 gallons per year.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following:
  - a. the company identification of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the volatile organic compound (VOC) content of each coating and cleanup material employed, in pounds per gallon, as applied;
  - d. the VOC emissions from each coating and cleanup material employed, i.e., (b)x(c), in pounds;
  - e. the total VOC emissions from this emissions unit, i.e., the sum of (d) for all coatings and cleanup materials employed, in pounds; and
  - f. the total gallons of all coatings and cleanup materials employed.
2. The permittee shall total the monthly records of the coating and cleanup usage, in gallons, at the end of each calendar year.
3. The permittee shall total the monthly records of the VOC emissions at the end of each calendar year.
4. The permit to install for emission units K007, K008 and K009 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant emitted at over a ton per year using the SCREEN3 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the use of the SCREEN3 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant:

**Issued: 12/11/2007**

Pollutant: Ethylene glycol butyl ether  
TLV (ug/m3): 96,660  
Maximum Hourly Emission Rate (lbs/hr): 0.73  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 43  
MAGLC (ug/m3): 2301

The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(d), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

#### **D. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing an exceedance of the coating and/or cleanup material usage limitation, the daily VOC emissions limitation, or the VOC content limitation. A

Emissions Unit ID: **K008**

copy of such record shall be sent to the Director within 45 days after the exceedance occurs.

2. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services which specify the total VOC emissions and the total coating and cleanup material usages from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

## E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.

VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).

Applicable Compliance Method:

The maximum daily VOC emissions rate shall be calculated by the following equation using the information submitted by the permittee in PTI Application 14-05996, submitted on October 23, 2007: Sum of [(maximum usage of each coating, in gallons per day) x (as applied VOC content of coating, in pounds per gallon)] for all coatings.

The actual annual VOC emission rate shall be demonstrated by the sum of all monthly VOC emissions for the calendar year based on the record keeping required by term and condition C.1.

2. Compliance with the VOC content limitations for the coatings and cleanup materials cited in terms and conditions A.2.a and A.2.b shall be demonstrated by the record keeping in term and condition C.1.
3. Formulation data or USEPA methods 24 or 24A shall be used to determine the VOC content for coatings and cleanup materials.
4. Compliance with the coating and cleanup material usage limitations cited in sections B.1 and B.2 shall be demonstrated by the record keeping in sections C.1 - C.3.

**Issued: 12/11/2007**

**F. Miscellaneous Requirements**

1. The terms and conditions of this air permit to install shall supersede the terms and conditions of permit to install 14-05524, as issued on January 29, 2004 and modified permit to install 14-05524, as issued on August 12, 2004.

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (K009) - Paint Spray Booth - Modification**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.</p> <p>VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).</p> <p>See terms and conditions A.2.a, A.2.b, A.2.d, B.1 and B.2.</p>

**2. Additional Terms and Conditions**

- 2.a The VOC content of any coating employed in this emissions unit shall not exceed 3.24 pounds of VOC per gallon of coating, as applied.
- 2.b The VOC content of any cleanup material employed in this emissions unit shall not exceed 3.25 pounds of VOC per gallon of cleanup material, as applied.
- 2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.
- 2.d The daily VOC emission limitation outlined above is based on the emission unit's potential to emit. Therefore, no daily records are required to demonstrate compliance with this limit.

**B. Operational Restrictions**

1. The maximum amount of coating employed in this emission unit shall not exceed 66.0

Emissions Unit ID: **K009**

gallons per day and 24,090 gallons per year.

2. The maximum amount of cleanup material employed in this emission unit shall not exceed 547.5 gallons per year.

### **C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following:
  - a. the company identification of each coating and cleanup material employed;
  - b. the number of gallons of each coating and cleanup material employed;
  - c. the volatile organic compound (VOC) content of each coating and cleanup material employed, in pounds per gallon, as applied;
  - d. the VOC emissions from each coating and cleanup material employed, i.e., (b)x(c), in pounds;
  - e. the total VOC emissions from this emissions unit, i.e., the sum of (d) for all coatings and cleanup materials employed, in pounds; and
  - f. the total gallons of all coatings and cleanup materials employed.
2. The permittee shall total the monthly records of the coating and cleanup usage, in gallons, at the end of each calendar year.
3. The permittee shall total the monthly records of the VOC emissions at the end of each calendar year.
4. The permit to install for emission units K007, K008 and K009 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application, and modeling was performed for the toxic pollutant emitted at over a ton per year using the SCREEN3 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the use of the SCREEN3 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the

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"worst case" pollutant:

Pollutant: Ethylene glycol butyl ether

TLV (ug/m3): 96,660

Maximum Hourly Emission Rate (lbs/hr): 0.73

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MAGLC (ug/m3): 2301

The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(d), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

#### **D. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing an exceedance of the coating and/or cleanup material

Emissions Unit ID: **K009**

usage limitation, the daily VOC emissions limitation, or the VOC content limitation. A copy of such record shall be sent to the Director within 45 days after the exceedance occurs.

2. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services which specify the total VOC emissions and the total coating and cleanup material usages from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

## E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
Volatile organic compound (VOC) emissions from the application of coatings shall not exceed 165.7 pounds per day.  
VOC emissions from the application of coatings and cleanup materials shall not exceed 31.13 tons per year (TPY).

### Applicable Compliance Method:

The maximum daily VOC emissions rate shall be calculated by the following equation using the information submitted by the permittee in PTI Application 14-05996, submitted on October 23, 2007: Sum of [(maximum usage of each coating, in gallons per day) x (as applied VOC content of coating, in pounds per gallon)] for all coatings.

The actual annual VOC emission rate shall be demonstrated by the sum of all monthly VOC emissions for the calendar year based on the record keeping required by term and condition C.1.

2. Compliance with the VOC content limitations for the coatings and cleanup materials cited in terms and conditions A.2.a and A.2.b shall be demonstrated by the record keeping in term and condition C.1.
3. Formulation data or USEPA methods 24 or 24A shall be used to determine the VOC content for coatings and cleanup materials.
4. Compliance with the coating and cleanup material usage limitations cited in sections B.1 and B.2 shall be demonstrated by the record keeping in sections C.1 - C.3.

**Issued: 12/11/2007**

**F. Miscellaneous Requirements**

1. The terms and conditions of this permit to install shall supersede the terms and conditions of air permit to install 14-05582, as issued on September 16, 2004.

Emissions Unit ID: **K009**

SIC CODE 3711 SCC CODE 40299999 EMISSIONS UNIT ID K007

EMISSIONS UNIT DESCRIPTION Paint Spray Booth - Modification

DATE INSTALLED 1/1/2008

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM <sub>10</sub>					
Sulfur Dioxide					
Organic Compounds	Non-attainment	165.7 lbs/day	31.13	165.7 lbs/day	31.13
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NA

NESHAP? NA

PSD? NA

OFFSET POLICY? NA

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

BAT is the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? NA

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? X YES      NO

IDENTIFY THE AIR CONTAMINANTS: Ethylene glycol butyl ether

Emissions Unit ID: **K009**

SIC CODE 3711 SCC CODE 40299999 EMISSIONS UNIT ID K008

EMISSIONS UNIT DESCRIPTION Paint Spray Booth - Modification

DATE INSTALLED 1/1/2008

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM <sub>10</sub>					
Sulfur Dioxide					
Organic Compounds	Non-attainment	165.7 lbs/day	31.13	165.7 lbs/day	31.13
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NA

NESHAP? NA

PSD? NA

OFFSET POLICY? NA

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

BAT is the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? NA

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? X YES      NO

IDENTIFY THE AIR CONTAMINANTS: Ethylene glycol butyl ether

Emissions Unit ID: **K009****Issued: 12/11/2007**

SIC CODE 3711 SCC CODE 40299999 EMISSIONS UNIT ID K009  
 EMISSIONS UNIT DESCRIPTION Paint Spray Booth - Modification  
 DATE INSTALLED 1/1/2008

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM <sub>10</sub>					
Sulfur Dioxide					
Organic Compounds	Non-attainment	165.7 lbs/day	31.13	165.7 lbs/day	31.13
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NA

NESHAP? NA

PSD? NA

OFFSET POLICY? NA

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

BAT is the specified mass emission limitations, coating and cleanup material VOC content limitations, and usage limitations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

NA**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*?

X

YES

     NO

IDENTIFY THE AIR CONTAMINANTS:

Ethylene glycol butyl ether