

**Synthetic Minor Determination and/or  Netting Determination**

Permit To Install: 02-22662

**A. Source Description**

Exal Corporation of Youngstown, Ohio manufactures aluminum cans for cosmetic and personal care products. The facility currently operates 12 lines, with 1 high speed line under construction. Most of these lines are identical, except the high speed line (K007) will have higher production capabilities. All of the lines are vented to either a catalytic or thermal incinerator. The company was operating under Ohio EPA's Engineering Guide 61, with presumed inherent physical limitations to avoid Title V status. With 11 lines in production in 2006 (not full production for K010, K011 and K012), the company emissions were 28.01 tons of OC, and 8.98 tons of HAPs. A synthetic minor was issued on 10/25/05 for K001 - K010, and another on 1/24/06 for K011 - K013, to limit the VOC emissions to avoid Title V and PSD, and the HAPs were restricted to avoid MACT.

**B. Facility Emissions and Attainment Status**

Mahoning County is currently attainment for ozone as of June 5, 2007. The potential to emit VOC for all 14 lines would be 254.66 TPY (including negligible cleanup emissions) without the synthetic minor. The synthetic minor will restrict VOC for all 14 lines to 93 TPY, combined HAPs to 18.75 TPY and single HAP to 7.5 TPY.

EU ID	Individual VOC Allowables (TPY)	Estimated Actual VOC (TPY)	Estimated Actual HAP (TPY)
K001	13.75	5.24	0.69
K002	13.75	3.88	0.52
K003	24.5	2.24	0.29
K004	12.57	3.02	0.48
K005	10.5	3.95	0.60
K006	14.95	1.62	0.18
K007	50.18	10	1.0
K008	10	5.8	0.7
K009	14.09	8	0.7
K010	14.09	8	0.7
K011	19.02	11	1.4
K012	19.02	11	1.4
K013	19.02	11	1.4
K014	19.22	15.6	5.78
Cleanup		2.3	0
<b>TOTALS</b>	<b>254.66</b>	<b>102.65</b>	<b>15.84</b>

**C. Source Emissions**

Each coating line consists of 3 coating application stations. One station is totally enclosed, and the other 2 are open to the building. All of the coating application stations are vented to an incinerator. Lines 1 and 2 are vented to VMB #1 catalytic incinerator. Lines 3 and 4 are vented to DURR thermal incinerator. Lines 5 and 6 are vented to VMB #2 catalytic incinerator. Line 7 is vented to VMB #3 catalytic incinerator. Line 8 is vented to VMB #4 catalytic incinerator. Lines 9 and 10 are vented to VMB #6 catalytic incinerator. Lines 11 and 12 are vented to VMB #7 catalytic incinerator. Line 13 is vented to VMB #10 catalytic incinerator. Line 14 will be vented to VMB #2 in the new building. Each line is tested for capture and destruction efficiency upon startup. Some of the lines have not been tested since 1999 or 2000 (Lines 1 -4), and the others have been tested recently upon installation. Each line is restricted to 85% overall destruction.

The company has chosen to restrict VOC emissions since this allows the most flexibility. Most of the lines have a line capacity of 110 cans per minute, but due to constraints from line breakdowns and can jams typically only average about 70 cans per minute. Also, the company has opted for periodic measurement of the weight of the coating on the cans instead of continuous measurement of gallons used. This makes limiting coating usage difficult. Compliance with the emission limitations will be tracked and enforced through testing, daily record keeping and annual reporting of emissions.

**D. Conclusion**

Limiting the VOC and HAP emissions will limit the potential facility emissions to 93 TPY VOC (total coatings and cleanup), combined HAPs to 18.75 TPY and single HAP to 7.5 TPY. Since these emissions are below the major source thresholds for Title V and PSD, a Title V and/or PSD permit is not required. Limiting HAPs also reduces emissions below the major source definition for MACT.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
MAHONING COUNTY**

**CERTIFIED MAIL**

Street Address:

Mailing Address:

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

Lazarus Gov.  
Center

**Application No:** 02-22662

**Fac ID:** 0250110920

**DATE:** 7/12/2007

EXAL Corporation  
Tom Alcaro  
One Performance Place  
Youngstown, OH 44502

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$200** will be due. Please do not submit any payment now.

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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

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

CC: USEPA

NEDO

EASTGATE DEV & TRANS STUDY

WV

PA

**MAHONING COUNTY**

PUBLIC NOTICE

ISSUANCE OF DRAFT PERMIT TO INSTALL **02-22662** FOR AN AIR CONTAMINANT SOURCE  
FOR **EXAL Corporation**

On 7/12/2007 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **EXAL Corporation**, located at **One Performance Place, Youngstown, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 02-22662:

**Aluminum can coating line.**

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Dennis Bush, Ohio EPA, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087  
[(330)425-9171]



**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 02-22662**

Application Number: 02-22662  
Facility ID: 0250110920  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: EXAL Corporation  
Person to Contact: Tom Alcaro  
Address: One Performance Place  
Youngstown, OH 44502

Location of proposed air contaminant source(s) [emissions unit(s)]:

**One Performance Place  
Youngstown, Ohio**

Description of proposed emissions unit(s):

**Aluminum can coating line.**

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

## 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 recordkeeping 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 recordkeeping 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 the premises of this source at any reasonable time for purposes of making inspections,

**EXAL Corporation**

**Facility ID: 0250110920**

**PTI Application: 02-22662**

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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.

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

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

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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 (coating and cleanup)	19.22 TPY individual line
	93 TPY (from facility)
Combined HAPs	18.75
Individual HAP	7.5

**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 - (K014) - can coating line 14 with catalytic incinerator**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Volatile organic compounds (VOC) emissions shall not exceed 4.39 lbs/hr and 19.22 tpy (from coatings and cleanup).
	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C).
	See sections A.2.a, A.2.b, A.2.c and B.1.
OAC rule 3745-21-09(B)(6) in lieu of OAC rule 3745-21-09(D)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V, MACT and PSD	VOC emissions from the facility* shall not exceed 93.0 tons per rolling, 12-month period (from coatings and cleanup).
	See sections A.2.d and B.2.

**2. Additional Terms and Conditions**

- 2.a The interior body spray booth, exterior basecoat applicator, overvarnish applicator and all bake ovens shall be vented to the catalytic incinerator. Overspray from the interior body spray booth shall be captured by a fabric filter.
- 2.b The permittee shall maintain for this emissions unit an overall VOC removal efficiency that is at least 85%, by weight, and a control efficiency (i.e., destruction or removal efficiency) that is at least 90%, by weight.
- 2.c The hourly limitation is based upon the emissions unit's potential to emit using maximum coating usage (gal/1000 cans), maximum production rate (cans per minute) and an 85% overall control efficiency. Therefore, no hourly record keeping and deviation reporting are required to demonstrate compliance.

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**2.d** The maximum annual Hazardous Air Pollutant (HAP) emissions generated at this facility\* shall not exceed 7.5 tons per year for any individual HAP and 18.75 tons per year for total combined HAPs, based on a rolling, 12-month summation of emissions.

\* The facility includes the following emissions units: K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013 and K014.

**B. Operational Restrictions**

1. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. The average temperature difference across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
2. The maximum annual volatile organic material usage (coatings and cleanup) at this facility\* shall not exceed 620 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. The maximum annual HAP material usage (coatings and cleanup) at this facility\* shall not exceed 50 tons of any individual HAP nor 125 tons of total combined HAPs, based upon a rolling, 12-month summation of the HAP material usage figures.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the usage levels specified in the following table:

<u>Month(s)</u>	<u>Max. volatile organic material use, tons/month</u>	<u>Max. HAPs material use, tons/month</u>	
		<u>Individual</u>	<u>Combined</u>
1	51.7	4.2	10.4
1-2	103.4	8.3	20.8
1-3	155.1	12.5	31.3
1-4	206.8	16.8	41.7
1-5	258.5	21.0	52.1
1-6	310.2	25.0	62.5
1-7	361.9	29.2	72.9
1-8	413.6	33.4	83.3
1-9	465.3	37.5	93.8

Emissions Unit ID: **K014**

1-10	517.0	41.8	104.2
1-11	568.7	46.0	114.6
1-12	620.0	50.0	125.0

After the first 12 calendar months of operation, compliance with the annual volatile organic material and HAPs material usage limitations shall be based upon a rolling, 12-month summation of the volatile organic material and HAPs material usage figures.

\* The facility includes the following emissions units: K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013 and K014.

### C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect and record the following information for each day of operation of this emissions unit:
  - a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall collect and record the following information each month for this emissions unit:

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- a. the name and identification number of each coating and cleanup material employed;
  - b. the VOC content of each coating and cleanup material, as applied, in pounds of VOC per gallon applied (PVGC);
  - c. the number of gallons of each coating and cleanup material (which shall be equal to the amount of each fresh cleanup material required minus the amount of each cleanup material recovered for disposal, in gallons) employed (CT);
  - d. for each coating and cleanup material, the amount of volatile organic material used and uncontrolled VOC emitted, in tons per month, defined as "CVOC" and calculated as follows:  
$$\text{CVOC} = [(CT) * (PVGC) * (1 \text{ ton}/2000 \text{ lbs})];$$
  - e. the total amount of volatile organic material used and uncontrolled VOC emitted from this emissions unit from all coatings and cleanup material employed, in tons per month, calculated as a summation of section C.3.d;
  - f. the total amount of controlled VOC emitted from this emissions unit from all coatings and cleanup material employed, in tons per month, calculated by multiplying the uncontrolled VOC tons per month by (1 - RE) (where RE = overall removal efficiency of the control device as determined during the most recent emission test that demonstrated that the emissions unit was in compliance); and
  - g. the total annual controlled VOC emitted from this emissions unit from all coatings and cleanup materials employed, in tons per year, calculated as a summation of monthly VOC emissions in section C.3.f.
- 4.** The permittee shall maintain monthly records of the following information for all of the emissions units at the facility\*:
- a. the individual HAP content of each coating and cleanup material, as applied, in pounds of HAP per gallon of coating or cleanup material applied;
  - b. the combined HAPs content of each coating and cleanup material, as applied, in pounds of HAP per gallon of coating or cleanup material applied (sum of all the individual HAP contents from section C.4.a);

Emissions Unit ID: **K014**

- c. the total individual HAP material usage from all coatings and cleanup materials employed, in tons per month for the facility\*, calculated as a summation of C.4.a x C.3.c;
  - d. the total combined HAPs material usage from all coatings and cleanup materials employed, in tons per month for the facility\*, calculated as a summation of C.4.b x C.3.c;
  - e. the total individual HAP emissions for each HAP from all coatings and cleanup materials employed, in tons per month and tons per rolling, 12-month period (individual HAP emissions = the summation of [total number of gallons x individual HAP content x (1 - RE)]/2000, for each coating and cleanup material, where RE = overall removal efficiency from the most recent performance test that demonstrated compliance);
  - f. the total combined HAPs emissions from all coatings and cleanup materials employed, in tons per month and tons per rolling, 12-month period (total combined HAPs emissions = the summation of [total number of gallons x combined HAPs content x (1 - RE)]/2000, for each ink, coating and cleanup material, where RE = overall removal efficiency from the most recent performance test that demonstrated compliance);
  - g. the cumulative, individual HAP emissions and cumulative, combined HAPs emissions from all the coatings and cleanup materials employed, in tons, for each calendar month during the first 12 months of operation following the issuance of this permit;
  - h. the rolling, 12-month summation of the volatile organic material usage figures for the facility\*, calculated by summing the volatile organic material used and uncontrolled VOC emitted from each emissions unit (C.3.e above), in tons; and
  - i. the rolling, 12-month summation of the controlled VOC emissions for the facility\*, in tons, calculated by multiplying the uncontrolled VOC tons per month by (1 - RE) (where RE = overall removal efficiency of the control device as determined during the most recent emission test that demonstrated that the emissions unit was in compliance).
- \* The facility includes the following emissions units: K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013 and K014.
5. The permit to install for this emissions unit (K014) was evaluated based on the actual

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materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):
 
$$\text{TLV OVER } 10 \sim \text{TIMES } \left\{ \frac{8 \text{ OVER } X}{4} \right\} \sim \text{TIMES } \left\{ \frac{5 \text{ OVER } Y}{4} \right\} \sim \text{MAGLC}$$
- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic

Emissions Unit ID: **K014**

contaminant(s):

Toxic Contaminant: xylene (and ethylbenzene)

TLV (mg/m3): 434.19 (for xylene and ethylbenzene)

Maximum Hourly Emission Rate (lbs/hr): 5.56 (for xylene and ethylbenzene)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 201.3

MAGLC (ug/m3): 10,337.91

The permittee, has demonstrated that emissions of xylene (and ethylbenzene), from emissions unit(s) K014, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

6. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, 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 new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic

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is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

7. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC 3745-114-01], Options A, Engineering Guide #70

8. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC 3745-114-01], Options A, Engineering Guide #70

**D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed did not comply with the temperature limitations specified above. (These reports do not waive the reporting requirements of OAC rule 3745-15-06.)
2. The permittee shall submit annual reports that specify the total VOC emissions, in tons, from the coatings and cleanup material for this emissions unit, and the total individual HAP emissions from the coatings and cleanup materials and the total combined HAPs emissions from the coatings and cleanup materials, in tons, for the entire facility, for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.
3. The permittee shall submit quarterly deviation reports that identify all exceedances of the annual VOC emission limitation for this emissions unit.
4. The permittee shall submit quarterly deviation reports that identify the following information for the facility\*:
  - a. all exceedances of the rolling, 12-month volatile organic material usage and VOC emission limitations;
  - b. all exceedances of the rolling, 12-month HAP material usage and emission limitations for combined HAPs and each individual HAP; and
  - c. during the first 12 calendar months of operation, all exceedances of the cumulative monthly VOC, individual HAP and combined HAPs material use and emissions limitations.
5. The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit. These reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.
6. The permittee shall submit annual reports to the Ohio EPA Northeast District Office documenting any changes made to a parameter or value used in the dispersion model

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that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC 3745-114-01], Options A, Engineering Guide #70

\* The facility includes the following emissions units: K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013 and K014.

**E. Testing Requirements**

1. Compliance with the emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall maintain for this emissions unit an overall VOC removal efficiency that is at least 85%, by weight, and a control efficiency (i.e., destruction or removal efficiency) that is at least 90%, by weight.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing procedures specified in section E.3 of these terms and conditions and the procedures specified in OAC rule 3745-21-10(C).

b. Emission Limitation:

VOC emissions shall not exceed 4.39 lbs/hr (from coatings and cleanup).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing procedures specified in section E.3 of these terms and conditions.

Emissions Unit ID: **K014**

## c. Emission Limitation:

VOC emissions shall not exceed 19.22 tpy (from coatings and cleanup).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section C.3.g of these terms and conditions.

## d. Emission Limitation:

VOC emissions from the facility\* shall not exceed 93.0 tons per rolling, 12-month period (from coatings and cleanup).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in sections C.3 and C.4 of these terms and conditions.

## e. Emission Limitation:

The maximum annual HAP emissions generated at this facility\* shall not exceed 7.5 tons per year for any individual HAP and 18.75 tons per year for any total combined HAPs, based on a rolling, 12-month summation of emissions.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in sections C.3 and C.4 of these terms and conditions.

## f. Emission Limitation:

The maximum annual volatile organic material usage (coatings and cleanup) at this facility\* shall not exceed 620 tons, based upon a rolling, 12-month summation of the volatile organic material usage figures. The maximum annual HAP material usage (coatings and cleanup) at this facility\* shall not exceed 50 tons of any individual HAP nor 125 tons of total combined HAPs, based upon a rolling, 12-month summation of the HAP material usage figures.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements

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specified in sections C.3 and C.4 of these terms and conditions.

2. Formulation data or USEPA Method 24 or Method 24A (for coatings and cleanup materials) shall be used to determine the organic compound contents of the coatings and cleanup materials.

\* The facility includes the following emissions units: K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013 and K014.

3. The facility shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 30 days following start of full production capacity.

- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC and the overall removal efficiency and control efficiency limitations for VOC.

- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A. The test methods which must be employed to demonstrate compliance with the overall control efficiency limitations for VOC are specified below.

- d. The test(s) shall be conducted under maximum production rates unless otherwise specified or approved by the Ohio EPA, Northeast District Office.

- e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e. the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Emissions Unit ID: **K014**

Not later than 30 days prior to the proposed test date(s), this facility shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the emission tests.

Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

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

1. Prior to coating beverage cans (as defined in 40 CFR Part 60, Subpart WW), the permittee shall apply for and obtain an Ohio EPA permit to install.
2. Pursuant to OAC rule 3745-31-05(C), the following terms and conditions are federally enforceable: sections A, B, C, D, E and F.

**EXAL Corporation**  
**PTI Application: 02-22662**  
**Issued: To be entered upon final issuance**

**Facility ID: 0250110920**

Emissions Unit ID: **K014**

SIC CODE 3411 SCC CODE 4-02-903-99 EMISSIONS UNIT ID K014

EMISSIONS UNIT DESCRIPTION can coating line 14 with catalytic incinerator

DATE INSTALLED upon issuance

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	attainment	3.94 lbs/hr	15.6	4.39 lbs/hr	19.22
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? \_\_\_\_\_ NESHAP? \_\_\_\_\_ PSD? \_\_\_\_\_ OFFSET POLICY? \_\_\_\_\_

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**  
**Enter Determination** Use of catalytic incinerator and record keeping.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes  
 OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ \_\_\_\_\_

**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: xylene, ethylbenzene