Facility Name: **Ball Metal Container Corporation**
Application Number: **03-0973**
Date: **March 24, 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 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.

**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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**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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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Ball Metal Container Corporation** located in **Hancock** 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.

| Ohio EPA Source Number | Source Identification Description | BAT Determination | Applicable Federal & OAC Rules | Permit Allowable Mass Emissions and/or Control/Usage Requirements |
|---|---|---|---|---|
| K002 (Mod) | Two-Piece Aluminum Beverage Container Mfg. Line | Compliance with Permit Allowable Emission Rate & Compliance with the Air Toxics Policy | 3745-31-05 | 40.72 lbs VOC/hr; (includes cleanup) 145.96 tons VOC/yr<br><br>0.29 lbs PM/hr 1.27 tons PE/year<br><br>0% opacity as a six-minute average |
| | | | 3745-17-07 | * |
| | | | 3745-17-11 | * |
| | | | 3745-21-09 (D)(1)(c) | Internal Coating: 4.2 pounds of VOC per gallon coating, minus water and exempt solvents; Basecoat Coating: 2.8 pounds of VOC per gallon coating (minus water and exempt solvents); |

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| Ohio EPA Source Number | Source Identification Number | BAT Determination | Applicable Federal & OAC Rules | Permit Allowable Mass Emissions and/or Control/Usage Requirements |
|---|---|---|---|---|
| K002 (mod cont'd) | | | 40 CFR 60 Subpart WW | Internal Coating: 0.89 kilogram of VOC per liter of coating solids; Basecoat Coating: 0.29 kilogram of VOC per liter of coating solids |
| | | | 3745-23 | N.G. Emissions: 2.12 lbs $NO_X$/hr; 9.29 tons $NO_X$/yr; 0.128 lbs VOC/hr; 0.56 tons VOC/yr |

* The limitations established in accordance with OAC 3745-31-05 are more stringent than those established under OAC 3745-17-07 and OAC 3745-17-11.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| Pollutant | Tons/Year |
|---|---|
| VOC | 146.52 |
| $NO_X$ | 9.29 |
| PM | 1.27 |

**NSPS REQUIREMENTS**

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

| Source Number | Source Description | NSPS Regulation (Subpart) |
|---|---|---|
| K002 | Aluminum Beverage Can Line | WW |

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than 30 days after such date);
b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
c. actual start-up date (within 15 days after such date); and
d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

and **Ohio EPA Northwest District Office**
**347 North Dunbridge Road**
**Bowling Green, Ohio 43402**

## 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 practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

**MALFUNCTION/ABATEMENT**

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402**.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

**AIR POLLUTION NUISANCES PROHIBITED**

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

**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.

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## ADDITIONAL SPECIAL TERMS AND CONDITIONS

### Introduction

PTI #03-10973 allows for the modification of Can Line #2 (emissions unit K002) at Ball Metal Container Corporation in Findlay, Ohio. Ball Metal Container Corporation is considered a major facility for PSD. However, this installation will only result in a facility VOC increase of 34.41 tons per year. Therefore, PSD will not be triggered.

Emissions unit K002 is subject to the requirements of 40 CFR Part 60, Subpart WW, as well as Ohio Administrative Code 3745-21-09 (D)(1)(c).

### A. Applicable Emission Limitations and/or Control Requirements

1. The volatile organic compound (VOC) content of the coatings employed shall not exceed the following limitation on a daily basis:

   a. 4.2 pounds of VOC per gallon of coating, excluding water and exempt solvents from an interior body coating line; and,

   b. 2.8 pounds of VOC per gallon of coating, excluding water and exempt solvents from a basecoat coating line.

2. The volatile organic compound content of the coatings employed shall not exceed the following limitation on a monthly, volume-weighted average:

   a. 0.89 kilogram of VOC per liter of coating solids from each two-piece can inside spray coating operation; and,

   b. 0.29 kilogram of VOC per liter of coating solids from each two-piece can exterior base coating operation.

3. The permittee shall not employ more than 145.96 tons of VOC per rolling 12-month period based upon the monthly VOC input rate* to emissions unit K002.

*Monthly VOC input rate = $\sum$ (C x D)

where

C = the number of gallons of each coating or cleanup material employed per month (all coating materials must be calculated excluding water and exempt solvents)

D = the VOC content of each coating or cleanup material employed in pounds of VOC per gallon of coating or cleanup materials (all coating materials must be calculated excluding water and exempt solvents)

Monthly VOC input rates are equivalent to monthly VOC emission rates and are based upon the assumption that 100% of the solvent in the coating and cleanup materials is emitted.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the input rates specified in the following table:

| Month | Maximum Allowable Cumulative Input Rates of VOCs (tons) |
|---|---|
| Month 1 | 30.00 |
| Months 1-2 | 41.00 |
| Months 1-3 | 51.00 |
| Months 1-4 | 62.00 |
| Months 1-5 | 72.00 |
| Months 1-6 | 83.00 |
| Months 1-7 | 93.00 |
| Months 1-8 | 104.00 |
| Months 1-9 | 114.00 |
| Months 1-10 | 125.00 |
| Months 1-11 | 136.00 |
| Months 1-12 | 145.96 |

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual input rate of 146.52 tons VOC per year shall be based

upon a rolling, 12-month summation of the monthly input rates.

**B. <u>Operational Restrictions</u>**

1. This permit allows the use of the coatings and cleanup materials specified by the permittee in the PTI 03-10973 for this emissions unit. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the isopropyl alcohol emission limitation(s) specified in this permit was (were) established in accordance with the Ohio EPA's "Air Toxics Policy" and is (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:

   Pollutant: Isopropyl Alcohol

   TLV (ug/m3): 983.

   Maximum Hourly Emission Rate (lbs/hr): 0.53

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 190.30

   MAGLC (ug/m3): 23,404.76

   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 Ohio EPA 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;

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. Each coating material employed in emissions unit K002 shall comply with the volatile organic compound content restrictions specified in A.1 of the terms and conditions on an "as applied" basis.

**C. <u>Monitoring and Recordkeeping Requirements</u>**

1. To demonstrate compliance with sections A.1 and A.3 of the terms and conditions of this permit, the permittee shall collect and record the following information each month for emissions unit K002 and maintain the information at the facility for a period of not less than five years (all records for coating materials shall be calculated excluding water and exempt solvents):

a. the name and identification number of each coating and cleanup material, as applied;

b. the VOC content of each coating and cleanup material;

c. the number of gallons of each coating and cleanup material employed;

d. the total VOC "usage (input) rate" for all coatings and cleanup materials, in pounds per month;

e. for the first 12 months of operation following the issuance of this permit, the cumulative monthly "usage (input) rate" of VOC, in tons per month; and,

f. after the first 12 months of operation following the issuance of this permit, the annual "usage (input) rate" of VOC based upon a rolling 12-month summation of the monthly emissions (input rates).

All records shall be retained in the permittee's files for a period of five years and shall be made available to the Northwest District Office, Division of Air Pollution Control, for review during normal business hours.

2. To determine compliance with the volatile organic compound (VOC) content limitation specified in section A.2 of the terms and conditions of this permit, the permittee shall determine the VOC content of the coatings according to one of the procedures listed in 40 CFR, Part 60, Subpart WW, Section 60.493.

3. The permittee shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine VOC emissions from each affected facility in the initial and monthly performance tests.

**D. <u>Reporting Requirements</u>**

1. The permittee shall include the following data in the initial compliance report required under 40 CFR, Part 60.8(a):

a. where only coatings which individually have a VOC content equal to or less than the limits specified under 40 CFR, Part 60.492 are used, and no VOC is added to the coating during the application or distribution process, the permittee shall provide a list of the coatings used for each affected facility and the VOC content of each coating calculated from data determined from using Reference Method 24 or supplied by the manufacturer of coatings; and,

b. where one or more coatings which individually have a VOC content greater than the limits specified under 40 CFR, Part 60.492 are used or where VOC are added or used in the coating process, the permittee shall report for each affected facility the volume-weighted average of the total mass of VOC per volume of coating solids.

2. The permittee shall submit quarterly written reports summarizing the following:

a. any deviations (excursions) from emission limitations and operational restrictions that have been detected by testing, monitoring, and recordkeeping requirements specified in this permit;

b. the probable cause of such deviations; and,

c. any corrective actions or preventive measures that have been or will be taken.

If no deviations occurred during the calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

The reports shall be submitted 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). All reports shall be submitted to the Northwest District Office.

3. The permittee shall notify the Ohio EPA, Northwest District Office, in writing of any monthly record showing the use of noncomplying coatings. The notification shall include a copy of such record and shall be sent to the Northwest District Office within 30 days following the end of the calendar month.

4. The permittee shall also submit annual reports which specify the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

**E. Testing Requirements**

1. The permittee shall conduct an initial performance test as required under 40 CFR, Part 60.8(a) and thereafter a performance test each calendar month, as defined in 40 CFR, Part 60.493.

2. Compliance Methods Requirements: Compliance with the emission limitations shall be determined in accordance with the following method(s):

   a. Emission Limitation: - interior coating - 4.2 pounds of VOC per gallon, minus water and exempt solvents

      Applicable Compliance Method: OAC rule 3745-21-10 (B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

b. Emission Limitation: - interior coating - 0.89 kilograms of VOC per liter of coating solids from each two-piece can inside spray coating operation

Applicable Compliance Method: Compliance shall be based upon the recordkeeping and reporting requirements specified in C.2 and D.1 of these terms and conditions.

c. Emission Limitation: - basecoat coating - 2.8 pounds of VOC per gallon, minus water and exempt solvents

Applicable Compliance Method: OAC rule 3745-21-10 (B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

d. Emission Limitation: - basecoat coating - 0.29 kilogram of VOC per liter of coating solids from each two-piece can inside spray coating operation

Applicable Compliance Method: Compliance shall be based upon the recordkeeping and reporting requirements specified in C.2 and D.1 of these terms and conditions.

e. Emission Limitation: - 40.72 pounds of VOC per hour

Applicable Compliance Method: This hourly limit represents the units "maximum capacity" i.e., its potential to emit based on the maximum hourly coating application rate. Although this permit

does not require periodic recordkeeping to verify compliance with this limit, the permittee shall maintain adequate records in the facility's files to verify that the emissions unit's maximum capacity has not been increased.

f. Emission Limitation: - 145.96 tons of VOC per rolling 12-month period

Applicable Compliance Method: Compliance shall be based upon the recordkeeping specified in section C.1. of the terms and conditions of this permit.

g. Emission Limitation: - coating - 0.29 pounds of PE per hour & 1.27 tons of PE per year

Applicable Compliance Method: Compliance with the PE emissions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03 (B)(10). In the absence of Ohio EPA requiring such testing, the permittee may calculate actual PM emission rates for the unit utilizing the following equation:

E = (actual coating solids usage rate in pounds per hour) x (1 - TE) x (1 - CE)

where

E = particulate matter emission rate (pounds per hour)

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids employed.

CE = control efficiency of the control equipment (filters)

h. Emission Limitation: - 0 percent opacity as a six-minute average

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

i. Emission Limitation: - natural gas emissions - 0.128 pounds of VOC per hour & 0.56 ton of VOC per year; 2.12 pounds of $NO_x$ per hour & 9.29 tons of $NO_x$ per year

Applicable Compliance Method: Ohio EPA will assume compliance with the above emission limitations provided that the permittee operates each burner of the Internal Coating Oven at 2.3 mmBTU/Hr, each burner of Decorating Oven 21 at 1.9 mmBTU/Hr, each burner of Decorating Oven 22 at 2.3 mmBTU/Hr, and each burner of the Washer Oven at 3.6 mmBTU/Hr.

F. Miscellaneous Requirements

A review of contemporaneous emissions increases/decreases showed that presses J and W were permanently shut down between in 1996 and 1997, respectively. The shut down of these presses resulted in a facility VOC decrease of 7.76 tons per year.

Press J was operating on low-VOC tab lubricant. The average emissions were based on a 4 year, 3 month operating period of the press. Average emissions over this time period equaled 0.67 tons of VOC per year.

Representative emissions from press W are as follows:

| Press | 1992 Emissions* | 1993 Emissions* | Average |
|---|---|---|---|
| | 7.89 TPY | 6.30 TPY | 7.09 TPY |

* 1992 and 1993 were chosen as the most recent representative years of operation at Ball Metal for press W due to decreased demands for large diameter ends.

Total Average Emissions From the Shutdown of Presses J and W: 7.76 TPY

Additionally, seven presses were converted to low-VOC tab lubricant in 1997. The average emissions from each press were

calculated over a five-year period dating from 1993 - 1997. Average emissions from each press are as follows:

| Press | 5 Year Average Actual Emission Rate | 5 Year Average Credit | New Allowable Emission Rate |
|---|---|---|---|
| QQ | 5.83 TPY | 5.33 TPY | 0.50 TPY |
| ZZ | 5.77 TPY | 5.27 TPY | 0.50 TPY |
| AA | 6.16 TPY | 5.66 TPY | 0.50 TPY |
| WW | 4.81 TPY | 4.31 TPY | 0.50 TPY |
| TT | 6.24 TPY | 5.74 TPY | 0.50 TPY |
| BB | 5.86 TPY | 5.36 TPY | 0.50 TPY |
| VV | 5.69 TPY | 5.19 TPY | 0.50 TPY |

Total Average Emissions From Conversion to Low-VOC Tab Lube: 36.86 TPY

Total Average Emissions From All Presses: 44.62 TPY

NETTING CALCULATIONS

To avoid PSD, the company must be able to demonstrate that the modification of Can Line #2, along with the modification/installation of emissions units K003 and K004, the conversion of seven presses to low-VOC tab lube, and the shut down of two former presses will not result in a significant increase of VOC emissions. The following summarizes the changes in emissions resulting from this modification for Can Line #2:

| | |
|---|---|
| 145.96 TPY | (Emissions that will result from the modification of Can Line #2) |
| + 39.19 TPY | (Contemporaneous increases resulting from Can Line #3/Respray Line |
| 185.15 TPY | (Total increase from Line #2, Line #3, and Respray Line) |
| -106.12 TPY | 5-Year Average emissions from Can Line #2 [1993 - 1997]) |
| 79.03 TPY | (Total emissions increase resulting from the modification) |
| -44.62 TPY | (Decrease from the shutdown or conversion of presses) |
| 34.41 TPY | (Actual emissions decrease resulting from the modification of Line #2) |