



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **032014-003**Project Number: 2013-10-051
Installation Number: 099-0044

Parent Company: Anheuser-Busch Companies, Incorporated

Parent Company Address: 1 Busch Place, St. Louis, MO 63118

Installation Name: Metal Container Corporation

Installation Address: 42 Tenbrook Industrial Park, Arnold, MO 63010

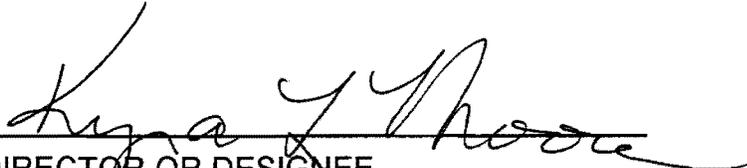
Location Information: Jefferson County, S28, T43N, R6E

Application for Authority to Construct was made for:

Increasing the maximum design rate of Line No. 5 from 1,440 cans per minute (cpm) to 2,250 cpm. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

 Standard Conditions (on reverse) are applicable to this permit. Standard Conditions (on reverse) and Special Conditions are applicable to this permit.**MAR 12 2014**

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Metal Container Corporation
Jefferson County, S28, T43N, R6E

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued Construction Permit No. 052012-016 issued by the Air Pollution Control Program.
2. **Emission Limitation**
 - A. Metal Container Corporation shall emit less than forty (40.0) tons of VOCs in any consecutive 12-month period from the emission units in Line No. 5, which are listed in Appendix A.
 - B. Metal Container Corporation shall emit less than ten (10.0) tons individually and twenty-five (25.0) tons combined of HAPs in any consecutive 12-month period from the entire installation. The entire installation includes all equipment/processes installed or permitted at Metal Container Corporation as of the effective date of this permit, including the emission units listed in Appendix A.
 - C. Attachment A, Attachment B, and Attachment C or equivalent forms, including electronic forms, shall be used to demonstrate compliance with Special Conditions 2.A. and 2.B.
 - D. A control efficiency of 97.0% shall be used in Attachment A and Attachment B for the regenerative thermal oxidizer (RTO, CD12/B008) until the actual control efficiency is determined according to the performance tests required by Special Condition 8.
 - 1) If performance testing indicates that the control efficiency is less than 97.0%, then Metal Container shall recalculate the monthly VOC and HAP emissions to account for the lower control efficiency.
 - 2) If performance testing indicates that the control efficiency is greater than 97.0%, then Metal Container has the option to recalculate the monthly VOC and HAP emissions to account for the higher control

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

efficiency.

- E. Metal Container Corporation shall account for periods of RTO malfunction by assuming a control efficiency of 0% (i.e. 100% emitted).
3. Capture Device Requirements – Permanent Total Enclosures
- A. Metal Container Corporation shall design, construct, and operate each of the operations listed in Table 1 below as a permanent total enclosure such that all emissions associated with the coating operations are captured and exhausted to the RTO (CD12/B008).

Table 1: Permanent Total Enclosures

Emission Unit	Emission Unit Description
P004	Basecoaters (3) & associated Pin Ovens (3)
P005	Printers (3), Varnishers (3) & associated Pin Ovens (4)
P006	Inside Spray Machine (2) & associated Inside Bake Oven (2)

- B. Metal Container Corporation shall design, construct, operate, and maintain each permanent total enclosure according to the requirements of the EPA Test Method 204 “Criteria for and Verification of a Permanent or Temporary Total Enclosure”, set forth in 40 CFR Part 51, Appendix M. (A capture efficiency of 100% is allowed for all enclosures meeting these requirements.)
- C. Metal Container Corporation shall demonstrate that each permanent total enclosure was constructed according to Special Condition 3.B. by keeping a record of the following design parameters for each permanent total enclosure:
 - 1) The location of all natural draft openings;
 - 2) The minimum recommended distance (per Method 204) and the actual distance from each natural draft opening to the emissions source;
 - 3) The maximum ratio (per Method 204) and the actual ratio of the total area of all natural draft openings to the total surface area of the permanent total enclosure; and
 - 4) The minimum average face velocity (per Method 204) and the average face velocity for the natural draft openings as determined during the initial performance test as required in Special Condition 8.C.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. Metal Container Corporation shall maintain an operating and maintenance log associated with the permanent total enclosures which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, time, date and duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

- 4. Baghouse (CD15) Requirements
 - A. Metal Container Corporation shall control particulate emissions from the inside spray coating process (P006) using a baghouse as specified in the permit application. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.

 - B. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' personnel may easily observe them. Replacement filters for the baghouse shall be kept on hand at all times.

 - C. Metal Container Corporation shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours while the inside spray coating process (P006) is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. Periods of non-operation in excess of 24 hours shall be indicated in the log required in Special Condition 4.D.

 - D. Metal Container Corporation shall maintain an operating and maintenance log for the baghouse which shall include the following:
 - 1) Incidents of malfunction with impact on emissions, time, date and duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

- 5. Control Device Requirement – Regenerative Thermal Oxidizer (RTO, CD12/B008)
 - A. Metal Container Corporation shall control emissions from the emission units listed in Table 2 using an RTO (CD12/B008) as specified in the permit application, except during periods of RTO malfunction.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Table 2: Emission Units Controlled by the RTO

Emission Unit	Emission Unit Description
P004	Basecoaters (3) & associated Pin Ovens (3)
P005	Printers (3), Varnishers (3) & associated Pin Ovens (4)
P006	Inside Spray Machine (2) & associated Inside Bake Oven (2)

- B. Metal Container Corporation may emit directly to the ambient air uncontrolled emissions from the emission units in Table 2 during periods of RTO malfunction.
 - C. The minimum operating temperature of the combustion chamber (°F) shall be established during initial performance testing required in Special Condition 8.
 - D. Metal Container Corporation shall maintain the combustion chamber above the minimum operating temperature specified in Special Condition 5.C. whenever the RTO is being used to control emissions from the units in Table 2.
 - E. Metal Container Corporation shall continuously monitor and record the combustion chamber temperature to demonstrate compliance with Special Condition 5.D.
 - F. Metal Container Corporation shall maintain an operating and maintenance log for the RTO which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
6. Record Keeping and Reporting Requirements
- A. Metal Container Corporation shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used.
 - B. Metal Container Corporation shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

City, MO 65102, no later than ten days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

7. Use of Alternative Coatings/Solvents
 - A. When considering the use of an alternative material in any of the emission units listed in Appendix A that is different than a material listed in the Application for Authority to Construct, Metal Container Corporation shall calculate the potential emissions of all individual hazardous air pollutants in the alternative material.
 - B. Metal Container Corporation shall seek approval from the Air Pollution Control Program before use of the alternative material if the potential individual HAP emissions for the alternative material are equal to or greater than the screening model action level (SMAL) for any compound listed in Appendix B. A listing of SMAL can be obtained online at <http://www.dnr.mo.gov/env/apcp/docs/cp-hapraltbl6.pdf> or by contacting the Air Pollution Control Program.
 - C. Attachment D or equivalent forms, including electronic forms, shall be used to show compliance with Special Conditions 7.A. and 7.B.
8. Performance Testing – RTO (CD12)
 - A. Metal Container Corporation shall perform an initial performance test on the RTO to determine the control efficiency of the RTO and the minimum combustion chamber temperature.
 - B. The stack testing shall be performed within sixty (60) days after achieving the maximum production rate of the can line but not later than 180 days after the initial start of operation. Testing shall be performed in accordance with the Proposed Test Plan required in Special Condition 8.D.
 - C. During the performance test, Metal Container Corporation shall verify the proper operation of each permanent total enclosure in accordance with United States Environmental Protection Agency (USEPA) Method 204. The verification procedure shall be included in the Proposed Test Plan required in Special Condition 8.D. and be approved by the Air Pollution Control Program's Compliance/Enforcement Section prior to the required emissions testing.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program at least 30 days prior to the proposed test date of any such performance tests so that a pretest meeting may be arranged, if necessary, and to assure that the test date is acceptable for an observer to be present. The Proposed Test Plan must include specification of test methods to be used and be approved by the Air Pollution Control Program's Compliance/Enforcement Section prior to conducting the required emissions testing.
- E. Two copies of a written report of the performance test must be submitted to the director within 90 days of completion of the performance testing. The report must include the following:
 - 1) Legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required EPA Methods for at least one sample run for each air pollutant tested; and
 - 2) The destruction efficiency for VOC; (Note: For compliance with Special Condition 2.B., the destruction efficiencies for VOC and HAP compounds are the same.); and
 - 3) The minimum temperature of the combustion chamber.
- F. The test report is to fully account for all operational and emissions parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2013-10-051
Installation ID Number: 099-0044
Permit Number:

Metal Container Corporation
42 Tenbrook Industrial Park
Arnold, MO 63010

Complete: October 21, 2013

Parent Company:
Anheuser-Busch Companies, Incorporated
1 Busch Place
St. Louis, MO 63118

Jefferson County, S28, T43N, R6E

REVIEW SUMMARY

- Metal Container Corporation has applied for the authority to increase the design rate for Line No. 5 from 1,440 cans per minute (cpm) to 2,250 cpm.
- HAP emissions are expected from the coating processes and from the combustion of natural gas. HAPs of concern from these processes are xylene (all isomers), formaldehyde (CAS 50-00-0), and ethyl benzene (CAS 100-41-4).
- 40 CFR 60 Subpart WW, "Standards of Performance for the Beverage Can Surface Coating Industry" of the NSPS applies to the surface coating operations.
- None of the National Emission Standards for Hazardous Air Pollutants for Source Categories (a.k.a. MACT) apply to the proposed equipment.
 - 40 CFR 63, Subpart T, "National Emission Standards for Halogenated Solvent Cleaning," does not apply because the facility does not operate a solvent cleaning machines as defined in this subpart.
 - 40 CFR 63 Subpart KKKK, "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans" does not apply because Metal Container Corporation is not a major source of HAP.
 - 40 CFR 63 Subpart HHHHHH, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources" because the coatings do not contain any of the target HAP compounds.
 - 40 CFR 63 Subpart XXXXXX, "National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal

Fabrication and Finishing Source Categories” because the coatings do not contain any of the target HAP compounds.

- Oil mist eliminators are being used to control particulate emissions from the lubricants used in the metal forming operations. However, without the oil mist eliminators, the potential emissions of PM_{2.5}, PM₁₀ and PM from this project will still be less than their respective de minimis levels. Therefore, this permit does not have a special condition that requires the facility to operate the oil mist eliminators.
- A regenerative thermal oxidizer (RTO) is being used to VOC and HAP emissions from the coating, printing and drying processes (P004, P005 and P006). A baghouse is being used to control the particulate mist generated by the inside spray coating process (P006).
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The VOC emissions for this project are conditioned to below the de minimis level. The HAP emissions are conditioned to less than the major source levels.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants. Although part of Jefferson County is a nonattainment area for lead, the installation is not located in the lead nonattainment area.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. However, the installation's major source level is 100 tons per year for VOC, NO_x, and PM_{2.5} because of its nonattainment status pertaining to ozone and PM_{2.5}. The major source level is 250 tons for all other pollutants. Fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since conditioned potential emissions of the application are below the de minimis levels and the SMAL.
- Performance testing is required to determine the control efficiency and the minimum operating temperature of the thermal oxidizer. Proper operation of the total enclosures shall be verified during the performance testing of the thermal oxidizer.
- An application for an amendment to your Part 70 Operating Permit is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Metal Container Corporation (Metal Container) produces the bottom section of two-piece aluminum beverage cans. Operations include metal stamping and forming,

coating, drying, and curing. Lid manufacturing and can filling operations do not occur at this facility. The facility is operating 4 can lines that produces identical 12-ounce cans. Although a permit was issued for a fifth can line in 1987, this line was never constructed. The installation was issued another permit (No. 052012-016) for a fifth can line in May, 2012 to produce 16-ounce cans. Due to change in market conditions, the facility submitted this application to increase the production rate of the line.

The installation exceeds the Title V major source thresholds for PM_{2.5}, PM₁₀, VOC, NO_x, and CO. Potential emissions of greenhouse gases (GHG), as measured by carbon dioxide equivalents (CO_{2e}), are less than levels that are subject to regulation. The installation is a major source for construction permits. The following permits have been issued to Metal Container Corporation from the Air Pollution Control Program.

Table 3: Permit History

Permit Number	Description
0279-001 to 0279-017	PSD/NA-NSR permit for the construction of 3 can lines (Lines 1, 2, and 3)
0486-001	1 can line (Line 4)
0287-001 to 0287-004	NA-NSR permit for the construction of 1 can line (Line 5) [Never Installed]
0589-001A	Replacement of the inside spray equipment on Line 3
0789-003	Installation of cartridge filters on the inside spray ovens
1291-001	Lime storage silo
0893-028	2 inside spray machines for Line 4
0494-010	Varnish bulk storage tanks
0495-018	Ink dot identification system
052012-016	Installation of a new production line

NA-NSR = Nonattainment New Source Review

PROJECT DESCRIPTION

In May, 2012, Metal Container Corporation's (MCC) Arnold Can Plant (ARN) received a permit (No. 052012-016) to install a new line to produce 16 ounce aluminum cans. This line was originally designed to produce 1,440 cpm, but due to changes in market conditions, the facility proposes to increase the maximum production rate to 2,250 cpm. As part of this project, the installation also plans to replace some of the coatings previously permitted in Permit No. 052012-016 with other coatings that have reduced solid, VOC or HAP contents.

Additional equipment will be required to achieve the new production rate. Table 4 below gives a comparison between the number of equipment needed to produce 1,440 cpm and 2,250 cpm. The addition of the new equipment is considered part of the same project as the initial installation of line 5 in Permit No. 052012-016.

Table 4: Equipment Comparisons

Emission Unit ID	Process	Equipment Type	For 1,440 cpm	For 2,250 cpm	Equipment Added
P001	Copper	Cuppers	2	3	1
P002	Front-End	Bodymakers/Trimmers	7	10	3
		Wet Can Elevator	1	2	1
P003	Front-End	Can Washers	1	2	1

		1.158 MMBtu/hr Dry Off Ovens	1	2	1
P004	Back-End	Basecoaters	2	3	1
		2.52 MMBtu/hr Pin Ovens	2	3	1
CD06	Control Device	13.5 MMBtu/hr Catalytic Oxidizer	1	1	0
P005	Back-End	Printers	2	3	1
		Varnishers	2	3	1
		2.52 MMBtu/hr Decorator Pin Oven	3	4	1
P006	Back-End	Inside Spray Machines	1	2	1
		3.433 MMBtu/hr Inside Bake Ovens	1	2	1
P007	Back-End	UV Bottom Coatings	1	2	1
P008	Final Preparation	0.40 MMBtu/hr Rinser Ovens	1	2	1
CD08	Copper	Scrap Aluminum Cyclone	1	1	0
CD09	Front-End	Munter-Style Unit	1	2	1
		Oil Mist Eliminator for Bodymakers and Trimmers	1	2	1
CD10	Front-End	Munter-Style Unit	1	2	1
		Oil Mist Eliminator for Wet Can Elevator	1	2	1
CD11	Back-End	Basecoater Cartridge Filter	1	1	0
CD12/B008	Back-End	6.64 MMBtu/hr Regenerative Thermal Oxidizer	1	1	0
CD13	Back-End	Printer Cartridge Filter	1	1	0
CD14	Back-End	Varnisher Cartridge Filter	1	1	0
CD15	Back-End	Inside Spray Baghouse	1	1	0
B004	Front-End	3.6 MMBtu/hr Washer Water Heater	1	2	1
F001	Clean-Up	Clean-Up Solvents	N/A	N/A	N/A
F002	Quality Control	Ink Dot and Videojet Coders	N/A	N/A	N/A

A summary of the emission units and control devices considered for this review are listed in Appendix A. A brief description of the process follows.

The body of the can is produced first in a series of metal forming operations consisting of the following emission units: three coppers (P001), ten bodymakers and trimmers (P002) and two wet can elevators (P002). These processes stamp small cups from a large roll of aluminum foil. The cups are then stretched and formed into the desired can size. The uneven edges at the top of the cans are trimmed to achieve a uniform height. Once sizing of the can is complete, the cans are washed with a water-based etching solution in order to remove the metal forming lubricants and to prepare the surface for coating.

The back end of the can line includes the following surface coating operations: ultraviolet (UV) bottom coating (P007), basecoating (P004), decorating (P005), varnishing (P005), inside spray coating (P006), ink dot marking (F002), and videojet

marking. UV bottom coating is a very high (99.8% by weight) solids material applied using a roller. Subsequent exposure to UV light cures the material without the need for any thermal drying or curing. Basecoat and varnish are applied using gravure rollers which deposit a thin, uniform coating on the can surface. Decorating is a printing technique, where several lithographic rollers, operating in series, are used to apply patterns of ink in various colors. Inside spray coating creates a continuous protective film between the product and the can and is applied using small airless spray nozzles. The ink dot marking and videojet marking processes spray a small color dot onto the bottom of the can for defect tracking purposes. Oven drying and curing occurs after basecoating, varnishing, and ink dot marking.

After the coatings are applied and cured, the cans are necked and flanged. The new 16-ounce specialty cans will undergo more severe necking than the 12-ounce cans, requiring more durable coatings. Once the final shape is complete, the cans are tested and packaged. The lid is manufactured at another facility and is attached after the can is filled. No lubricants or other materials are applied during necking and flanging, and no emissions are expected from these processes.

EMISSIONS/CONTROLS EVALUATION

Particulate Matter Emissions

A cyclone will be used to transfer the aluminum scrap from the cuppers to an aluminum scrap bin. Although a cyclone is used in this operation, it is not considered a control device because the cupping or stamping operation is not expected to generate particulate emissions.

A water-based coolant used in the metal forming processes (P002) is a potential source of particulate emissions. Potential emissions were calculated using historical usage data and a mass balance approach assuming 10% of the coolant solids are emitted with the majority of coolant solids being discharged to the sewer. Potential emissions of the application represent the uncontrolled potential emissions of the coolant used in the metal forming operations (P002). Although emissions from these processes will be captured with hoods and vented to two Muenther style mist eliminators, these control devices are not required by this permit because even without the mist eliminators, the PM_{2.5}, PM₁₀ and PM potential emissions are still below their respective de minimis levels. The controlled potential emissions of the application include the uncontrolled potential emissions of the coolant.

Exhaust from the basecoating (P004), decorating (P005), and varnishing (P005) processes will be vented to cartridge filters for the control of particulate emissions. However, these operations are all roll coating processes which are considered a negligible source of particulate emissions. According to AP-42, Section 4.2.2.10, *Metal Coil Surface Coating*, the transfer efficiency of roll coating operations approaches 100%. UV bottom coating (P007) is also a roll coating process. Emissions are not expected from this process and it will have no pollution controls.

Overspray emissions from the inside spray coating process (P006) will be vented to a baghouse to control particulate emissions. Metal Container proposed a transfer efficiency of at least 80%. An EPA report, *Metal Surface Coating (Can Coating), Emissions Test Report, Metal Container Corporation, Jacksonville, FL* (December 1979), calculated the overspray from the inside spray coating process to be 17% which supports Metal Container's proposal to use a 20% overspray.

The inside spray process will be operated within a permanent total enclosure expected to capture 100% of particulate emissions. Overspray from the inside spray coating machine will be vented to a baghouse with an expected control efficiency of 99%. Since a particle size distribution is not available for inside spray coating, all particulate matter emitted was assumed to be PM_{2.5}.

Overspray emissions from ink dot marking (F002) and videojet marking are uncontrolled. A conservative estimate of 50% overspray was assumed for these processes. The marking inks are very low in solids and potential emissions were calculated assuming 100% of the overspray is emitted as PM_{2.5}.

Volatile Organic Compounds/Hazardous Air Pollutants

Metal Container has proposed to enclose the basecoating (P004), decorating (P005), varnishing (P005), and inside spray coating (P006) processes within individual permanent total enclosures in order to achieve 100% capture of all emissions from these processes. An enclosure is assumed to have 100% capture efficiency if it meets the criteria specified in 40 CFR Part 51, Appendix M, Method 204 "Criteria for and Verification of a Permanent or Temporary Total Enclosure". As previously indicated, emissions from these processes will be vented to particulate controls, and then the exhaust will be combined and vented to a single regenerative thermal oxidizer (RTO, CD12). Metal Container expects the RTO to achieve 97% destruction efficiency for VOC and HAP compounds. A special condition of this permit requires Metal Container to test the thermal oxidizer and use the actual destruction efficiency when calculating emissions for compliance with the HAP and VOC emission limits specified in this permit.

Can line 5 will have operations similar to lines 1 – 4; however, the elongated shape of the specialty can presents distinct challenges. As a result, Metal Container is not certain which coating materials will achieve the best performance, and the potential emissions of the project were calculated for the materials with the highest VOC and HAP contents. Potential emissions of the processes operating within the permanent total enclosures were calculated using a mass balance approach and assuming 100% of the VOC and HAP compounds were exhausted to the RTO (CD12, B008). Although formaldehyde is not an ingredient of any of the process materials, formaldehyde emissions may be formed during the curing of the basecoat and varnish coatings. Potential emissions of formaldehyde were calculated using stack test results from a similar facility and scaling the emissions for this application.

VOC and HAP emissions are not expected from the metal forming operations (P001 and P002) or the UV bottom coating process (P007). The ink dot marking (F002) and videojet marking processes are uncontrolled, and potential emissions of the VOC and

HAP compounds were calculated using a mass balance approach assuming 100% emitted. Metal Container uses primarily isopropyl alcohol for cleaning. Potential emissions of VOC associated with cleaning activities were calculated using historical usage rates and assuming 100% emitted.

Combustion Emissions

Emissions from the combustion of natural gas are expected from the drying/curing ovens (P003, P004, P005, P006, and P008), the can washer water heater (B004), and the RTO (CD12, B008). The combined maximum design rate of these units is 41.89 MMBtu/hr. The emission factors used in the analysis of the natural gas combustion units were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4 “Natural Gas Combustion” (July, 1998).

Potential emissions of the application represent the potential of all equipment from Line No. 5, assuming continuous operation (8760 hours per year). Actual emissions were obtained from the 2012 EIQ as the 2013 EIQ has not been submitted yet. The following table provides an emissions summary for this project. The company accepted installation-wide limits of 10.0 tpy of individual HAP and 25.0 tpy of combined HAP to avoid being a major source for HAP. The installation also accepted a project limit of 40 tpy of VOC to avoid PSD review.

Table 5: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels ^[1]	Existing Potential Emissions ^[2]	Existing Actual Emissions (2012 EIQ)	Uncontrolled Potential Emissions of the Application	Controlled Potential Emissions of the Application ^[3]	Control Potential Emissions of the Installation
PM _{2.5}	10.0	116.4	2.58	75.85	5.95	N/A
PM ₁₀	15.0	123.4	2.58	75.85	5.95	N/A
PM	25.0	N/D	N/D	75.85	5.95	N/A
SO _x	40.0	21.2	0.07	0.11	0.11	N/A
NO _x	40.0	371.9	11.31	17.96	17.96	N/A
VOC	40.0	MAJOR	105.04	510.54	<40.0	N/A
CO	100.0	101.8	9.48	15.09	15.09	N/A
GHG-CO ₂ e ^[4]	75,000	77,324	N/D	21,684.23	21,684.23	N/A
GHG-Mass ^[4]	0	N/D	N/D	21,553.87	21,553.87	N/A
Combined HAPs	25.0	<25.0	0.02	16.96	0.84	<25.0
Individual HAP	10.0	N/D	N/D	N/A	N/A	<10.0
Xylene (all isomers)	10.0	N/D	N/D	3.42	0.10	<10.0
Formaldehyde (CAS 50-00-0)	2.0	N/D	N/D	12.69	0.38	<10.0
Ethyl benzene	10.0	N/D	N/D	0.50	0.015	<10.0

(CAS 100-41-4)						
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N/A = Not Applicable; N/D = Not Determined

¹For individual HAPs, value represents the SMAL.

²Obtained from operating permit number OP2011-057. Does not include equipment permitted in Permit 052012-016. Emissions from equipment in Permit 052012-016 are included in the emissions of the application. The potential emissions in the operating permit did not consider required controls or other federally enforceable permit restrictions.

³The potential controlled emissions of VOC are 22.2 tons per year. The project is limited to less than 40 tons of VOC because Metal Container is not required to shut down operations during thermal oxidizer malfunction events and must account for oxidizer malfunction by assuming that 100% of VOC are emitted

⁴PSD review needed only if GHG-CO₂e emissions exceed 75,000 **and** GHG-Mass emissions exceed 0 tpy.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC for this project are conditioned to below de minimis levels. HAP emissions for the installation are conditioned to less than major source levels.

APPLICABLE REQUIREMENTS

Metal Container Corporation shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emissions of Particulate Matter from Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-6.405, applies to the hot water heaters

- *Control of Emissions From Industrial Surface Coating Operations*, 10 CSR 10-5.330, applies to the surface coating operations (P003, P004, P005, P006, F002)
- *Control of Emissions From Rotogravure and Flexographic Printing Operations*, 10 CSR 10-5.340, applies to the printing (decorating) coating processes (P005)

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for the Beverage Can Surface Coating Industry*, 40 CFR Part 60, Subpart WW

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 15, 2013, received October 21, 2013, designating Anheuser-Busch Companies, Incorporated as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Material Safety Data Sheets (MSDS)
- EPA report entitled, *Metal Surface Coating (Can Coating), Emissions Test Report, Metal Container Corporation, Jacksonville, FL* (December 1979)

Attachment A – Monthly VOC Compliance Worksheet (For Line No. 5)

Metal Container Corporation
 Jefferson County, S28, T43N, R6E
 Project Number: 2012-02-041
 Installation ID Number: 099-0044
 Permit Number: _____

This sheet covers the month of _____ in the year _____.

Non-Combustion Emissions						
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Material Used (Name)	VOC Control Device	Amount of Material Used (Include Units)	Density (Pounds per Gallon)	(a) VOC Content (Weight %)	(b) Percent Emitted (%)	(c) VOC Emissions (Tons)
Combustion Emissions						
				Fuel Usage (mmscf or MMBtu)	(d) Emission Factor (lb/mmscf or lb/MMBtu)	(e) VOC Emissions (tons)
(f) Total VOC Emissions Calculated for this Month in Tons:						
(g) Last Month's 12-Month VOC Emissions Total, in Tons:						
(h) Previous Year's Monthly VOC Emissions Total, in Tons:						
(i) Current 12-month Total of VOC Emissions in Tons: [(d) + (e) - (f)]						

Instructions: This worksheet must include VOC emissions from all emission units listed in Appendix A.

- (a) VOC content may be supplied by the manufacturer or obtained by testing using an EPA recommended test method. If a range for the VOC content is given, use the highest value in the range.
- (b) Percent emitted = 100% - (% Capture Efficiency x % Control Efficiency). Control Efficiency = 0% during periods of oxidizer malfunction and for processes not vented to a VOC control device (i.e. 100% emitted)
- (c) 1) If usage is in tons - [Column 3] x [Column 5] x [Column 6] = [Column 7];
 2) If usage is in pounds - [Column 3] x [Column 5] x [Column 6] x [0.0005] = [Column 7];
 3) If usage is in gallons - [Column 3] x [Column 4] x [Column 5] x [Column 6] x [0.0005] = [Column 7];
- (d) Combustion emission factors (EF) can be found in the appropriate chapters in EPA document AP-42. For Natural Gas, EF is 5.5 lb/mmscf or 0.0054 lb/MMBtu (Based on 1,020 BTU/scf heating value)
- (e) VOC emissions from combustion calculated using [Column 5] x [Column 6] x [0.0005]
- (f) Summation of [Column 7] in Tons;
- (g) 12-Month VOC emissions (i) from last month's Attachment A in Tons;
- (h) Monthly VOC emissions total (f) from the previous year's Attachment A in Tons; and
- (i) Calculate the new 12-month VOC emissions total. A 12-Month VOC emissions total (i) of less than **40.0** tons indicates compliance.

Attachment B – Monthly Individual HAP Compliance Worksheet (For the Entire Installation)

Metal Container Corporation
 Jefferson County, S28, T43N, R6E
 Project Number: 2012-02-041
 Installation ID Number: 099-0044
 Permit Number: _____

This sheet covers the month of _____ in the year _____.

HAP Name: _____ CAS No.: _____

Non-Combustion Emissions						
Column 1	Column 2	Column 3	Column 4	Column 5 (a)	Column 6 (b)	Column 7 (c)
Material Used (Name)	Control Device	Amount of Material Used (Include Units)	Density (Pounds per Gallon)	HAP Content (Weight %)	Percent Emitted (%)	HAP Emissions (Tons)
Combustion Emissions						
				Fuel Usage (mmscf or MMBtu)	(d) Emission Factor (lb/mmscf or lb/MMBtu)	(e) VOC Emissions (tons)
(f) Total Individual HAP Emissions Calculated for this Month in Tons:						
(g) Last Month's 12-Month Individual HAP Emissions Total, in Tons:						
(h) Previous Year's Monthly Individual HAP Emissions Total, in Tons:						
(i) Current 12-month Total of Individual HAP Emissions in Tons: [(d) + (e) - (f)]						

Instructions: This worksheet must include HAP emissions from all emission units installed or permitted at the time of permit issuance. Complete a new worksheet for each individual HAP.

- HAP content may be supplied by the manufacturer or obtained by testing using an EPA recommended test method. If a range is given for the HAP content, use the highest value in the range.
- Percent emitted = 100% - (% Capture Efficiency x % Control Efficiency). Control Efficiency = 0% during periods of oxidizer malfunction and for processes not vented to a VOC/HAP control device (i.e. 100% emitted)
- If usage is in tons - [Column 3] x [Column 5] x [Column 6] = [Column 7];
 - If usage is in pounds - [Column 3] x [Column 5] x [Column 6] x [0.0005] = [Column 7];
 - If usage is in gallons - [Column 3] x [Column 4] x [Column 5] x [Column 6] x [0.0005] = [Column 7];
- Combustion emission factors can be found in the appropriate chapters in EPA document AP-42.
- HAP emissions from combustion calculated using [Column 5] x [Column 6] x [0.0005]
- Summation of [Column 7] in Tons;
- 12-Month Individual HAP emissions (i) from last month's Attachment B in Tons;
- Monthly Individual HAP emissions total (f) from the previous year's Attachment B in Tons; and
- Calculate the new 12-month Individual HAP emissions total. **A 12-Month Individual HAP emissions total (i) of less than 10.0 tons for each individual HAP indicates compliance.**

Attachment D - Evaluation of Alternative Materials (For Line No. 5)

(Copy this sheet as needed.)

Metal Container Corporation
 Jefferson County, S28, T43N, R6E
 Project Number: 2012-02-041
 Installation ID Number: 099-0044
 Permit Number: _____

This sheet covers material: _____
 (New Material Name)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
Individual HAP Name and CAS No.	Emission Unit	Percent Emitted (%)	HAP Content (weight %)	Production Rate (Mcans/hr)	Maximum Expected Application (lb/Mcans)	HAP Emission rate (lb/hr)	Individual HAP PTE (tons per year)	Individual HAP SMAL (tons per year)
<i>Benzene 71-43-2</i>	<i>Inside Spray</i>	<i>3%</i>	<i>20.0</i>	<i>86.4</i>	<i>0.02</i>	<i>0.010</i>	<i>0.045</i>	<i>2.0</i>
				<i>86.4</i>				
				<i>86.4</i>				
				<i>86.4</i>				
				<i>86.4</i>				

Instructions: This worksheet shall be completed one time for each new material (i.e. materials not provided for evaluation in the original application) used in any of the processes listed in Appendix A.

Column 1: This information is reported on the MSDS. Compare each ingredient on the MSDS with the chemical names listed in Appendix B.

Column 3: Percent Emitted = 100% - (%Capture Efficiency x %Control Efficiency)

Column 4: HAP content may be supplied by the manufacturer or obtained by testing using an EPA recommended test method. If a range for the HAP content is given, use the highest value in the range.

Column 5: Maximum Production Rate (86.4 thousand cans (Mcans) per hour)

Column 6: Expected application rate in pounds per thousand cans of the new material (coating or solvent)

Column 7 = [Column 3]/100 x [Column 4]/100 x [Column 5] x [Column 6]

Column 8 = [Column 7] x 8760 / 2000

Column 9: SMAL (tons per year) obtained from Appendix B, or online at <http://www.dnr.mo.gov/env/apcp/docs/cp-hapraltbl6.pdf> or from the Air Pollution Control Program.

If Column 8 exceeds Column 9 then contact the Air Pollution Control Program's New Source Review Unit to determine if a new permit is required for use of the new material.

Appendix A – Emission Unit Summary (Line 5 Only)

Metal Container Corporation
 Jefferson County, S28, T43N, R6E
 Project Number: 2012-02-041
 Installation ID Number: 099-0044
 Permit Number: _____

Emission Unit	Process	Emission Unit Description	Design Rate	Capture Device	Control Device	Control Device Description
P001	Copper	(3) Cuppers	4.48 tons scrap aluminum per million cans	Hood	CD08	(1) Scrap Aluminum Cyclone
P002	Front-End	(10) Bodymakers/Trimmers	2,250 cans per minute total	Hood	CD09	(1) Muenther Oil Mist Eliminator
		(2) Wet Can Elevator	2,250 cans per minute total	Hood	CD10	(1) Muenther/Oil Mist Eliminator
P003	Front-End	(2) Dry-off Oven	1.16 mmBtu per hour each	N/A	N/A	N/A
B004	Front-End	(2) Washer Water Heater	3.6 mmBtu per hour	N/A	N/A	N/A
P004	Back-End	(3) Basecoaters (3) Pin Ovens	2,250 cans per minute total 2.52 mmBtu per hour each	Total Enclosure	CD11	(1) Cartridge Filter
					CD12/B008	(1) 6.64 mmBtu per hour Regenerative Thermal Oxidizer
P005	Back-End	(3) Decorator Printers	2,250 cans per minute total	Total Enclosure	CD13	(1) Cartridge Filter
					CD12/B008	(1) 6.64 mmBtu per hour Regenerative Thermal Oxidizer
P005	Back-End	(3) Overvarnishers (4) Pin Ovens	2,250 cans per minute total 2.52 mmBtu per hour each	Total Enclosure	CD14	(1) Cartridge Filter
					CD12/B008	(1) 6.64 mmBtu per hour Regenerative Thermal Oxidizer
P006	Back-End	(2) Inside Spray Machine (2) Inside Bake Oven (IBO)	2,250 cans per minute total 3.43 mmBtu per hour each	Total Enclosure	CD15	(1) Baghouse
					CD12/B008	(1) 6.64 mmBtu per hour Regenerative Thermal Oxidizer
P007	Back-End	(2) UV Bottom Coat	2,250 cans per minute total	N/A	N/A	N/A
P008	Final Preparation	(2) Rinser Oven	0.4 mmBtu per hour each	N/A	N/A	N/A
F001	Clean-Up	Manual Cleaning Activities	2,250 cans per minute	N/A	N/A	N/A
F002	Quality Control	Ink Dot Coders Videojet Coders	2,250 cans per minute	N/A	N/A	N/A

Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CARBARYL	63-25-2	10	V	Y	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CARBON DISULFIDE	75-15-0	1		Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CARBON TETRACHLORIDE	56-23-5	1		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
ACETOPHENONE	98-86-2	1		Y	N	CARBONYL SULFIDE	463-58-1	5		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CATECHOL	120-80-9	5		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
ACROLEIN	107-02-8	0.04		Y	N	CHLORAMBEN	133-90-4	1		Y	Y	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N	CHLORDANE	57-74-9	0.01		Y	Y	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
ACRYLIC ACID	79-10-7	0.6		Y	N	CHLORINE	7782-50-5	0.1		N	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
ACRYLONITRILE	107-13-1	0.3		Y	N	CHLOROACETIC ACID	79-11-8	0.1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
AMINOBIHENYL, [4-]	92-67-1	1	V	Y	N	CHLOROBENZENE	108-90-7	10		Y	N	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
ANILINE	62-53-3	1		Y	N	CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	DIMETHYL PHTHALATE	131-11-3	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CHLOROFORM	67-66-3	0.9		Y	N	DIMETHYL SULFATE	77-78-1	0.1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
ANTIMONY COMPOUNDS		5	H	N	Y	CHLOROPRENE	126-99-8	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	CHROMIUM COMPOUNDS		5	L	N	Y	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	CHRYSENE	218-01-9	0.01	V	Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	COBALT COMPOUNDS		0.1	M	N	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	COKE OVEN EMISSIONS	8007-45-2	0.03		N	Y	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
ASBESTOS	1332-21-4	0	A	N	Y	CRESOL, [META-]	108-39-4	1	B	Y	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
BENZENE	71-43-2	2		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	CUMENE	98-82-8	10		Y	N	ETHYL ACRYLATE	140-88-5	1		Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N	ETHYL BENZENE	100-41-4	10		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y	ETHYL CHLORIDE	75-00-3	10		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N	ETHYLENE GLYCOL	107-21-1	10		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N	ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DIAZOMETHANE	334-88-3	1		Y	N	ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
BERYLLIUM SALTS		2E-05	J	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N	ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DIOXINS/FURANS		6E-07	D,V	Y	N	ETHYLENE OXIDE	75-21-8	0.1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DIBENZOFURAN	132-64-9	5	V	Y	N	ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N	FORMALDEHYDE	50-00-0	2		Y	N
BROMOFORM	75-25-2	10		Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N	GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y	GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N	HEPTACHLOR	76-44-8	0.02		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y	HEXACHLOROBENZENE	118-74-1	0.01		Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N	HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N	HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N	HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
CAPROLACTAM (Delisted)	105-60-2					DICHLOROMETHANE	75-09-2	10		N	N	HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
CAPTAN	133-06-2	10		Y	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y	HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N

APPENDIX C

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SIC	Standard Industrial Classification
GHG	Greenhouse Gas	SIP	State Implementation Plan
gpm	gallons per minute	SMAL	Screening Model Action Levels
gr	grains	SO_x	sulfur oxides
GWP	Global Warming Potential	SO₂	sulfur dioxide
HAP	Hazardous Air Pollutant	tph	tons per hour
hr	hour	tpy	tons per year
hp	horsepower	VMT	vehicle miles traveled
lb	pound	VOC	Volatile Organic Compound
lbs/hr	pounds per hour		
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Raymond Taylor
EH&S Manager
Metal Container Corporation
42 Tenbrook Industrial Park
Arnold, MO 63010

RE: New Source Review Permit - Project Number: 2012-02-041

Dear Mr. Krause:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathi Jantz, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

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Enclosures

c: St. Louis Regional Office
PAMS File: 2012-02-041

Permit Number: