

# Fact Sheet



## *For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act*

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on March 28, 2007.

Permit Number: **R30-00900027-2007, Part 1 of 2**

Applications Received: **November 24, 2008 and March 11, 2010**

Plant Identification Number: **03-54-009-00027**

Permittee: **Ball Metal Food Container Corporation**

Mailing Address: **3010 Birch Drive, Weirton, West Virginia 26062**

Permit Action Number: *MM01*      Revised: *July 12, 2010*

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Physical Location:                      Weirton, Brooke County, West Virginia  
UTM Coordinates:                      531.9 km Easting • 4,470.8 km Northing • Zone 17  
Directions:                                From downtown Weirton, south on Rt.2 to Freedom Way. Right on  
Freedom Way to Birch Drive. On Birch Drive approximately 1 mile.  
Facility is on the right side of road in Weirton Steel complex in Half  
Moon Park.

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### Facility Description

The plant receives coils of tin-plated steel which it cuts into sheets and coats with a protective varnish. The sheets are cured in an oven and either transferred to the end department to be pressed into ends or shipped off site to be made into food can bodies.

The plant has four (4) coating lines and five (5) permitted end lines. Emissions from three (3) of the coaters/ovens (Em. Unit IDs C-1, C-2, and C-3) have been controlled by a Corpak Air Preheater F147 thermal oxidizer. The fourth coater/oven (Em. Unit ID C-4) is controlled by a Catalytic Products SR-6000 thermal oxidizer combined with a permanent total enclosure (PTE) capture system. Four (4) end lines have converted to no-HAP end compound to comply with 40 C.F.R. Part 63 Subpart KKKK. The fifth end line uses water-based compound.

This permitting action will replace the Corpak Air Preheater F147 thermal oxidizer with a MEGTEC CLEANSWITCH Regenerative Thermal Oxidizer (RTO). The Corpak thermal oxidizer had a design capacity of 17 MMBtu/hr, while the MEGTEC RTO is much more efficient with a capacity of 4.0 MMBtu/hr. Additionally, the VOC loading in the incoming exhaust steam has an estimated heating content of about 3.8 MM Btu/hr. This will allow the operation of the RTO to be self-sustaining from combustion of solvents in the exhaust with the introduction of natural gas, as needed, to maintain operation. The Corpak oxidizer was not designed to be operated in such a manner. Using the MEGTEC RTO will also reduce emissions as explained in the Emissions Summary.

This permitting action will also address changes required by Appeal #09-02-AQB. This appeal resolved issues between Ball and the WVDAQ concerning R13-1458C. This appeal was addressed in R13-1458D. As part of the changes made in R13-1458D, three coater hoods were replaced with Permanent Total Enclosures (PTEs).

The facility is characterized by SIC Code 3411, and NAICS Code 332431.

**Emissions Summary**

Replacement of the oxidizer and coater hoods will result in the following reductions in emissions:

Emission Comparison of the Oxidizers		
	Net Change	
Pollutant	lb/hr	TPY
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	-0.10	-0.43
Sulfur Dioxide	-0.01	-0.03
Oxides of Nitrogen	-1.30	-5.69
Carbon Monoxide	-1.09	-4.78
Volatile Organic Compounds	-52.29	-288.87

**Title V Program Applicability Basis**

With the proposed changes associated with this modification, this facility maintains the potential to emit over 100 TPY of VOC, and 25 TPY of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, and over 25 tons per year of aggregate HAPs, Ball Metal Food Container Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

**Legal and Factual Basis for Permit Conditions**

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	
	45CSR30	Operating permit requirement.
	40 C.F.R. 63 Subpart KKKK	Can Coating MACT
State Only:	None	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-1458D	April 30, 2010	
Appeal #09-02-AQB	March 31, 2010	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

### Determinations and Justifications

#### Major Source under 45CSR14

Ball Metal Food Container Corp.'s Weirton Facility previously operated as two (2) facilities owned by different companies:

- Untied States Can Company's Half Moon Facility
- Ball Metal Food Container Corp's Weirton Facility

On March 27, 2006, Ball acquired Untied States Can Company's Half Moon facility and began operating under the name of Ball Aerosol and Specialty Container Inc. Ball Corporation, the owner of Ball Metal Food Container Corp, requested that the Ball Aerosol and Specialty Container's Half Moon Facility and Ball Metal Food Container Corp's Weirton Facility become one facility and be operated under the name of Ball Metal Food Container Corp. in October of 2007. The combined Weirton facility became classified as a major source for VOCs under 45CSR14 and subject to a MACT standard.

#### Language in Condition 3.1.9.

This condition prohibited the use of coatings or solvents containing hazardous volatile constituents different from those submitted in Permit Application R13-1458 without prior approval by the Director, as specified in Condition A.9. of R13-1458B. Since the facility is now a major source for HAPs and subject to a MACT standard, this requirement was removed from R13-1458C. However, Ball still desires to have this condition in their Title V permit. Since this condition was added upon Ball's request and is no longer in R13-1458, the reference to R13-1458 was replaced with 45CSR§30-12.7, which addresses permit conditions proposed by a permit applicant.

**Language in Condition 3.1.10.**

This condition limited the facility wide VOC emission rates from all sources at this facility to 233.42 tons per year, as specified in Condition A.10. of R13-1458B. This condition set a plant wide VOC limit which made the facility a minor source with respect to 45CSR14. However, this limit is no longer valid.

According to the engineering evaluation for R13-1458C, removing this condition might allow Ball to circumvent the Major Source - Major Modification requirements of 45CSR14. To prevent this, the condition was rewritten in R13-1458C so that the reference to “plantwide” is replaced with “Building 33”. The sources permitted under R13-1458B, R13-1546, and R13-2111A are located in Building 33. This Title V permit was updated to reflect this change.

**Language in Conditions 3.5.3. and 3.5.5.**

These conditions were updated to include electronic submittal requirements of the annual certification submitted to the EPA.

**Additional Recordkeeping Requirements in Section 3.4**

Recordkeeping requirements concerning the maintenance and malfunctions of air pollution control equipment were added in R13-1458C, and were added to this Title V permit as Conditions 3.4.5 and 3.4.6. Also, with R13-1458C, Ball is required to keep onsite technical information of the VOC content of coatings applied in Building 33; this requirement was added to this Title V permit as Condition 3.4.7.

**Language in Condition 4.1.1. and Appendix A**

Condition 4.1.1. and Appendix A were updated for a more recent verification report dated January 3, 2007.

**Coater Monitoring Requirements in Condition 4.2.2.**

With R13-1458C, Ball is now required to maintain the following records for C-1, C-2, and C-3:

- Usage of each coating and solvent.
- VOC content of each compound and solvent.
- Hours of operation of each sheet coating line during the month.
- Usage of each cleaning solvent and VOC emissions from cleaning solvent usage.
- Amount of VOC emitted from each sheet coating line.
- Fugitive point source VOCs emissions.

**Language in Condition 4.5.1.**

This condition requires annual reports to be submitted, as specified in Condition B.2. of R13-1458B and Condition A.8. of R13-2111A.

The permit writer removed this condition from R13-1458B citing the following reasons:

- Since the facility is no longer a synthetic minor source under 45CSR14, these reports are no longer necessary.
- The facility is subject to Title V and currently operates under a Title V operating permit. The facility’s Title V permit requires the submission of semi and annual compliance reports. The condition in R13-1458B appears to duplicate this reporting requirement.

The references to R13-1458B were removed from this condition; however the condition itself remains in the permit. Condition A.8. of R13-2111A, which is worded almost exactly as Condition 4.5.1. of the Title V permit, has not been changed or removed. Therefore, this facility must still comply with this condition.

**Language in Condition 6.1.1.**

This permit condition restates permit conditions previously included in this Title V permit for the Air Preheater F147, which is being replaced with the RTO. While the new RTO is being added to this permit, it is not yet operating. The language in Condition 6.1.1. ensures compliance until the RTO is operational. At that time, this permit condition will be voided.

**Language in Condition 6.1.2.**

This condition (previously Condition 6.1.1.) limited the VOC emission rates from emission point 1E (the basecoater incinerator) to a maximum of 27.19 pounds per hour, referencing Condition A.1. of R13-1458B.

Condition A.1. was rewritten as Condition 4.1.7.a of R13-1458C. To account for emission changes due to the installation of the MEGTEC CLEANSWITCH Regenerative Thermal Oxidizer (RTO), the new condition reduced the VOC emission limit to 8.20 pounds per hour. The new condition also contains limits for PM/PM<sub>10</sub>/PM<sub>2.5</sub>, NO<sub>x</sub>, and CO. This Title V permit was updated to reflect these changes.

**Language in Condition 6.1.3.**

This condition (previously Condition 6.1.2.) specified an overall VOC reduction efficiency of 85.5% for the Corpak Air Preheater F147 thermal incinerator, referencing Condition A.7. of R13-1458B. Based on equipment information provided in the Title V permit application, the The MEGTEC CLEANSWITCH RTO, which replaces the Corpak thermal incinerator, has an estimated reduction efficiency of 99% and a minimum efficiency of 98%.

Condition A.7. was rewritten as Condition 4.1.7.c. of R13-1458C and specifies the VOC destruction efficiency be maintained at 98%. This Title V permit was updated to reflect this change.

**Language in Condition 6.1.4. and 6.2.13.**

Condition 6.1.4 (previously Condition 6.1.3.) specified a minimum operation temperature of 1400°F in the incinerator chambers of both the Corpak Air Preheater F147 and Catalytic Products SR-6000 thermal oxidizers (Emission Unit IDs: TO-1 and TO-2, respectively), referencing Condition A.8. of R13-1458B and Condition A.1. of R13-2111A. Based on equipment information provided in the Title V permit application, the The MEGTEC CLEANSWITCH RTO, which replaces the Corpak thermal incinerator, has a combustion temperature of 1600°F during typical operation of the feeding units. The RTO has a combustion temperature of 1800°F during maximum operation of the feeding units.

Condition A.8. was rewritten as Condition 4.1.7.d. of R13-1458C and specifies the operating temperature of the RTO (TO-1) be maintained at 1600°F until the operating temperature can be established during the most recent performance testing that demonstrates compliance with the destruction efficiency requirement of 98%. Monitoring requirements for the duct static pressure and temperature are outlined in condition 6.2.13.

**Language in Conditions 6.1.15, 6.1.19, 6.1.20, 6.2.2, 6.3.3, 6.3.6, and 6.4.2**

Previously, emissions from coaters C-1, C-2, and C-3 were captured in hoods mounted over the coater roll and sent to an RTO. These hoods are being replaced with Permanent Total Enclosures (PTEs) to achieve 100% VOC capture efficiency.

Conditions 6.1.15 and 6.3.3 were specifically written for the hoods, and these permit conditions were removed. The remaining conditions were revised to regulate the PTEs.

**Language in Conditions 6.1.17, 6.1.18, 6.1.21, 6.3.7, 6.3.8, and 6.3.9**

These permit conditions were added to address new operating requirements for the RTO. These new permit conditions address:

- Measuring and recording temperature measurements.
- Valve inspection.
- Operation and maintenance of air pollution control equipment.
- Performance testing to determine initial compliance with the VOC limit in Condition 6.1.2.
- Measuring visible emissions from the RTO.
- Testing required when setting new operating limits for the RTO and capture system.

**Language in Conditions 6.2.1. and 6.2.10.**

These conditions specify monitoring requirements for the combustion temperatures of TO-1 and TO-2. Various regulations and permits are referenced with some streamlining:

- Compliance with the continuous temperature recording requirement of R13-2111A ensures compliance with the less stringent recording requirement of R13-1458D, which required the temperature to be recorded every 15 minutes.
- Compliance with the device accuracy limit of  $\pm 0.75\%$  of the temperature value, as specified in R13-2111A, ensures compliance with less stringent limit of  $\pm 1$  percent of the temperature, as specified in 40 C.F.R. Part 63 and R13-1458D.

No requirements were changed in these conditions; however, they were revised for clarity.

**Language in Conditions 6.2.14. and 6.5.2.**

Monitoring and reporting requirements for a “bypass line” were added with R13-1458D. The bypass line acts as an emergency vent for each coating oven, opening to the atmosphere during an RTO malfunction. During an RTO malfunction, a damper closes, blocking flow to the RTO. The damper is interlocked with dampers on each coating oven so that they automatically open. Emissions should be negligible since all three lines shut down when the RTO damper is closed. In addition to being addressed in the MACT, they are required by the National Fire Protection Association standards.

**Non-Applicability Determinations**

The following requirements have been determined not to be applicable to the subject facility due to the following:

None

**Request for Variances or Alternatives**

None

**Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

**Comment Period**

Beginning Date: N/A

Ending Date: N/A

All written comments should be addressed to the following individual and office:

Rex Compston  
Title V Permit Writer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**Point of Contact**

Rex Compston  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
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**Response to Comments (Statement of Basis)**

Not applicable.