



Louisville Metro Air Pollution Control District
 701 West Ormsby Avenue, Suite 303
 Louisville, Kentucky 40203-3137



xx October 2016

Construction Statement of Basis

Owner: Brown-Forman Cooperage

Source: Brown-Forman Cooperage

Plant Location: 402 Maclean Avenue, Louisville, KY 40209

Date Application Received: 6/8/2016

Application Number: 77688

Public Comment Date: xx/xx/2016

District Engineer: Kim Loechle

Permit No: C-0026-1000-16-V (R2)

Plant ID: 0026

SIC Code: 2449

NAICS: 32192

Introduction:

This permit will be issued pursuant to District Regulation 2.03, *Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements*. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM_{2.5}), unclassifiable for the 2012 standard for particulate matter less than 2.5 microns (PM_{2.5}) and partial non-attainment for sulfur dioxide (SO₂).

Application Type/Permit Activity:

- Initial Issuance
- Permit Revision
 - Administrative
 - Minor
 - Significant
- Permit Renewal
- Construction

Compliance Summary:

- Compliance certification signed
- Compliance schedule included
- Source is out of compliance
- Source is operating in compliance

I. Source Information

1. **Plantwide Overall Process Description:** Brown-Forman Cooperages production of white oak barrels involves six major production processes including: Drying operations, Barrel stave operations, Head stave operation, Char operations, Steam Generation, and Barrel coating and sealing operations.
2. **Project Description:** Correcting inaccuracies in the capacity calculations of the process cyclones thus correcting the allowable lb/hr limits. Emission Unit, E6, Sawdust Storage Tank, installed in 1696, as described in the previous permits, has been removed.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Construction No.	Equipment Description
C-0026-1000-16-V (R2)	Barrel and Head Production and Finishing Operations

5. Permit Revisions

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	C-0026-1000	09/24/14	08/24/14	Initial	Entire Permit	Initial Permit Issuance
2	C-0026-1000-16-V	Xx/xx/16	Xx/xx/16	Significant	Entire Permit	Revised calculations

6. **Fugitive Sources:** There are no fugitive emissions for this project.

7. Plantwide Emission Summary:

Pollutant	District Calculated Actual Emissions (tpy) 2014 Data	Major Source Pollutants (based on PTE)
CO	365.93	Yes
NO _x	49.44	No1
SO ₂	2.67	No

1 The source has potential to exceed 100 tpy of NO_x, however a plant-wide limit was taken to avoid NO_x RACT.

Pollutant	District Calculated Actual Emissions (tpy) 2014 Data	Major Source Pollutants (based on PTE)
PM ₁₀	38.2	Yes
VOC	15.96	No
Total HAPs	4.18	No
Single HAP > 1 tpy	All individual HAPs < 1 tpy	No

8. Applicable Requirements:

PSD 40CFR60 SIP 40CFR63
 NSR 40CFR61 District-Origin Other

9. Referenced MACT Federal Regulations:

N/A

10. Referenced non-MACT Federal Regulations:

N/A

II. Regulatory Analysis

1. Acid Rain Requirements: The source is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements: Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source’s use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r): The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.

4. 40 CFR Part 64 Applicability Determination: This project and affected equipment is not major for any criteria pollutant. In accordance with 40 CFR 64, Compliance Assurance Monitoring for Major Stationary Sources, the source is required to propose a CAM plan based on current process and control device requirements and practices.

5. Basis of Regulation Applicability

a. Plant-wide

Regulation 2.03, section 6.1 requires sufficient monitoring, record keeping, and reporting to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Brown-Forman submitted their TAC Environmental Acceptability Demonstration to the District on January 3, 2007, January 14, 2008, and March 22, 2012. Compliance with the STAR EA Goals was demonstrated in the source’s EA Demonstrations. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. The carcinogen risk and non-carcinogen risk values, calculated using the District approved PTE for each unit and the SCREEN model results from the source’s EA Demonstration, comply with the STAR EA goals required in Regulation 5.21.

b. Permit C-0026-1000-16-V (R2): Emission Unit U2: Barrel and Head Production and Finishing Operations

i. Equipment:

Emission Point	Description	Applicable Regulation	Basis for Applicability
E1	Conveyance from Woodworking 1 Equipment	7.08	Regulation 7.08, the process cyclone is subject to PM emission standard and was installed after September 1, 1976.
E2	Conveyance from Woodworking 2 Equipment		
E3	Conveyance from Woodworking 3 Equipment		
E4	Conveyance from Woodworking 4 Equipment		
E5	Conveyance from Woodworking 5 Equipment		

ii. Standards/Operating Limits

1) PM

Regulation 7.08, Section 3.1.2 establishes a pound per hour PM emission standard, based on the process weight rate.

The equation to calculate the PM emission limit is

$$E = 3.59(P)^{0.62},$$

where E is the lb/hr allowable emission limit and P is the process weight rate expressed in tons/hr.

- (a) The potential controlled PM process cyclones E1, E2, E3, E4, and E5 are all below the standards, therefore there are no monitoring, record keeping, or reporting requirements except for the control devices.
- (b) Pursuant to Regulation 2.05, PM emissions for E1, E2, E3, E4, and E5 shall not equal or exceed 25 tons per 12 consecutive month period.
- (c) Pursuant to Regulation 2.05, PM₁₀ emissions for E1, E2, E3, E4, and E5 shall not equal or exceed 15 tons per 12 consecutive month period.

2) **Opacity**

Pursuant to Regulations 7.08, visible emissions shall not equal or exceed 20% opacity.

iii. **Monitoring and Record Keeping**

1) **PM**

Emission Calculation Methodology: For PM emissions calculations, the source calculates emission from emission factors and each stack taking into account the varying control efficiencies for the various baghouses.

Regulation 7.08 does not establish specific record keeping or monitoring requirements, however, Regulation 2.16, Section 4.1.9.1 and 4.1.9.2 requires sufficient record keeping and monitoring to assure compliance with the terms and conditions of the permit.

2) **Opacity**

Regulation 7.08 does not require any specific monitoring requirements for opacity, however, Regulation 2.16, Section 4.1.9.1 and 4.1.9.2 requires sufficient monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit.

III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility for these emission points.
5. **Compliance History:**

Incident Date	Regulation Violated	Result
10/14/1992	1.14 (Fugitive Visible Past Property Line)	Settled (2/17/1993)
4/8/1993	1.14 (Fugitive Building/Equipment)	Board (8/18/1993)
4/30/1993	1.14 (Fugitive Open Site)	Board (8/18/1993)
5/10/1993	1.14 (Fugitive Building/Equipment)	Board (8/18/1993)
5/27/1993	1.14 (Fugitive Building/Equipment)	Board (8/18/1993)
6/10/1993	1.14 (Fugitive Building/Equipment)	Board (8/18/1993)
9/14/1993	1.14 (Fugitive Building/Equipment)	Settled (11/12/1993)
8/13/1998	1.09 (Air Pollution General Prohibition)	Settled (10/12/1998)
8/22/2000	1.14 (Fugitive Building/Equipment)	Settled (12/5/2000)
4/15/2003	1.09 (Air Pollution General Prohibition)	Settled (4/8/2004)
11/20/2003	1.09 (Air Pollution General Prohibition)	Settled (4/8/2004)
11/28/2006	1.09 (Air Pollution General Prohibition)	Settled (1/29/2007)
8/31/2012	2.16 (Failure to Comply Title V permit)	Settled (4/3/2014)