

Application Review

Issue Date: Date needed

Region: Winston-Salem Regional Office
County: Guilford
NC Facility ID: 4100996
Inspector's Name: Andrew Kormos
Date of Last Inspection: 09/21/2022
Compliance Code: 3/Compliance – inspection

Facility Data

Applicant (Facility's Name): Flowers Baking Company of Jamestown, LLC

Facility Address:

Flowers Baking Company of Jamestown, LLC
 801 West Main Street
 Jamestown, NC 27282

SIC: 2051 / Bread Cake and Related Products
NAICS: 311812

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0515, .0516, .0521,
NSPS: N/A
NESHAP: N/A
PSD: N/A
PSD Avoidance: N/A
NC Toxics: N/A
112(r): N/A
Other: N/A

Contact Data

Application Data

Facility Contact	Authorized Contact	Technical Contact
Ray Dudley ES&S Manager (336) 841-8840 PO Box 819 Jamestown, NC 27282 Ray.Dudley@flocorp.com	Anthony Ufland General Manager (336) 841-8840 PO Box 819 Jamestown, NC 27282 Tony.Ufland@flocorp.com	Ray Dudley ES&S Manager (336) 841-8840 PO Box 819 Jamestown, NC 27282 Ray.Dudley@flocorp.com

Application Number: 4100996.22A
Date Received: 09/26/2022
Application Type: Title V
Application Schedule: TV-Renewal
Existing Permit Data
Existing Permit Number: 08250/T07
Existing Permit Issue Date: April 10, 2018
Existing Permit Expiration Date: March 31, 2023

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	0.02	2.50	32.94	2.1	0.15	0.047	0.045 (n-Hexane)
2020	0.01	2.53	34.91	2.13	0.15	0.048	0.046 (n-Hexane)
2019	0.01	2.54	29.14	2.13	0.18	0.047	0.046 (n-Hexane)
2018	0.01	2.82	30.98	3.15	0.28	0.050	0.048 (n-Hexane)
2017	0.01	2.69	33.49	3.19	0.29	0.048	0.046 (n-Hexane)

Review Engineer: Jacob Larson

Review Engineer's Signature: **Date:**

Comments / Recommendations:

Issue: 08250/T08
Permit Issue Date: Date needed
Permit Expiration Date: Date needed

1. Purpose of Application

Flowers Baking Company LLC. Currently holds Title V permit No. 08250T07 with an expiration date of March 31, 2023 for a bakery in Jamestown, Guilford County, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on September 26, 2022 or at least six months prior to expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

2. Facility Description

Flowers is a commercial bakery that produces loaf bread and buns. White and wheat flour are delivered to this facility via truck and pumped into three split silos (six total compartments). Flour is pneumatically blown into the building where it is temporarily stored before being sifted and sent to each line's respective mixers to make dough. There are two lines at this facility. The bun line uses one large mixer while the bread line uses two smaller mixers. Dough on each line is dispensed to pans prior to baking and travels through electrically heated proofers to help the bread rise quicker. After proofing, the breads are cooked in two natural gas-fired ovens.

The bread dough has flour, sugar, and yeast. Combining these ingredients causes fermentation to occur, and ethanol is released. Ethanol is a volatile organic compound but is neither a hazardous air pollutant (HAP) nor a toxic air pollutant (TAP). The other emissions from the facility come primarily from combustion and flour handling. The facility operates 24 hours per day, 7 days per week, and 52 weeks per year. The facility has approximately 275 employees.

3. History/Background/Application Chronology

History/Background

- | | |
|----------------|---|
| April 10, 2018 | TV permit renewal issued. Air Permit No. 08250T07 was issued on April 10, 2018 with an expiration date of March 31, 2023. |
| July 19, 2018 | Notice of Violation (NOV) of Condition 2.1.B.2.c and 2.1.B.1.d of air quality permit 08250T07. |
| July 30, 2018 | Facility responded to the NOV issues by letter addressed to WSRO, demonstrating compliance. |

Application Chronology

- | | |
|-------------------|---|
| September 6, 2022 | DEQ received permit application 4100996.22A for renewal. |
| October 20, 2022 | Sent acknowledgment letter indicating that the application for permit renewal was complete. |
| March 06, 2023 | Comments received from Booker Pullen, Permitting Supervisor. |

- March 07, 2023 Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received March 10, 2023
- March 07, 2023 Draft permit and review forwarded to the Asheville Regional Office for comments. Minor comments were received March 16, 2023.
- March 07, 2023 Draft permit forwarded to the applicant for comments. Minor comments were received March 16, 2023.
- XXXXXX xx, 2023 Draft permit and permit review forwarded for a 30-day public notice and a 45-day EPA review.
- XXXXXX xx, 2023 Public comment period ends. _____ comments received.
- XXXXXX xx, 2023 EPA comment period ends. _____ comments received.
- XXXXXX xx, 2023 Permit issued.

4. Permit Modifications/Changes and TVEE Discussion

The following table describes the modifications to the current permit as part of the renewal process.

The following changes were made to Air Permit No.: 08250T07

Page No.	Section	Description of Changes
Cover and throughout	Throughout	<ul style="list-style-type: none"> Updated all tables, dates, and permit revision numbers.
Pg. 3 of the cover letter	Cover Page	<ul style="list-style-type: none"> Added “Notice Regarding the Right to Contact a Division of Air Quality Permit Decision”
Pg. 4 of cover letter	Summary of Changes to Permit	<ul style="list-style-type: none"> Added summary of changes made to Permit No. 08250T07 according to the most recent requirements of the renewal Title V Permit
Pg. 2 of Permit	Table of Contents	<ul style="list-style-type: none"> Added section 3.0 as “Insignificant Activities List” Added section 4.0 as “ General Permit Conditions”
Pg. 3 of Permit	List of Acronyms	<ul style="list-style-type: none"> Added “List of Acronyms”
Pg. 5 of Permit	2.1 A.3	<ul style="list-style-type: none"> Corrected paragraph structure from a-c-d to a-b-c.
Pg. 8 of Permit	Section 3	<ul style="list-style-type: none"> Added Insignificant Activities as Section 3 of the Title V Permit
Pg. 8 of Permit	Section 3	<ul style="list-style-type: none"> Changed 7 Wax Printers to 9 (IA-WP).
Pg. 8 of Permit	Section 3	<ul style="list-style-type: none"> Changed 2 Depanners to 3 (IA-DP).
Pg. 8 of Permit	Section 3 Table	<ul style="list-style-type: none"> Corrected NSPS IIII to the applicable regulation NSPS JJJJ for emergency generator (I-EG5).
Pg. 8 of Permit	Section 3 Table	<ul style="list-style-type: none"> Removed “additional information link” in footnote of the Insignificant Activities Table” because referenced site no longer exist on the website.
Pg. 9-17 of Permit	General Conditions	<ul style="list-style-type: none"> Added General Conditions version 6.0, 01/07/2022 as Section 4 of the Title V Permit

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

5. Regulatory Review

The facility is subject to the following air quality regulations in addition to the General Conditions:

- 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0516 “Sulfur Dioxide Emissions from Combustion Sources”

- 15A NCAC 02D .0521 “Control of Visible Emissions”

A. Two natural gas-fired bread/bun ovens (ID Nos. ES-01 and ES-03)

- 15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes - Minimal particulate matter (PM) emissions result from the two natural gas-fired bread/bun ovens (**ID Nos. ES-01 and ES-03**). This condition states that the facility must maintain production records such that the process rates “P” in tons/hour, as specified to the applicable formula stated in the permit, can be derived and made available to DAQ upon request. During the record review portion of the last inspection September/2022¹, Mr. Dudley presented the facility’s spreadsheet containing the total amount of dough in tons/day that are baked. In July of 2022, the facility’s oven throughput (bread and buns) was totaled to be 2,448.58 tons/month (3.19 tons/hour). The YTD data shows a total throughput of 18,400.93 tons/YTD. The records appeared to be complete and were acceptable to fulfill the record keeping requirement of this condition. Continued compliance is anticipated.
- 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES Emission of sulfur dioxide from any source of combustion that is discharged from any vent, stack, or chimney shall not exceed 2.3 pounds of sulfur dioxide per million BTU input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Sulfur dioxide formed or reduced as a result of treating flue gases with sulfur trioxide or other materials shall also be accounted for when determining compliance with this standard.

A source subject to an emission standard for sulfur dioxide in Rules .0524, .0527, .1110, .1111, .1205, .1206, .1210, or .1211 of 15A NCAC shall meet the standard in that rule, instead of 2.3 lb/million Btu emission standard under 2D .0516.

Natural gas has negligible sulfur content, as per AP-42 (Section 1.4 Natural Gas Combustion, Table 1-4.2, July 1998). The emission factor from this table is 0.6 lbs of SO₂/million ft³.

$$\frac{0.6 \text{ lbs SO}_2}{1 \times 10^6 \text{ ft}^3 \text{ nat gas}} \times \frac{1 \text{ ft}^3 \text{ nat gas}}{1020 \text{ Btu}} \times \frac{1,000,000 \text{ Btu}}{\text{mm Btu}} = \frac{5.88 \times 10^{-4} \text{ lbs SO}_2}{\text{mmBtu}} \text{ or rounded to } \frac{0.0006 \text{ lbs SO}_2}{\text{mmBtu}}$$

Sulfur dioxide emissions are estimated to be 0.0006 lb/million Btu. Hence, compliance with the SO₂ standard of 02D .0516 is expected.

- 15A NCAC 02D .0521, Control of Visible Emissions - This facility is limited to 20% opacity when averaged over a six-minute period for sources manufactured after July 1, 1971, and 40% opacity for sources manufactured as of July 1, 1971, when averaged over a six-minute period. During previous inspection², no visible emissions over 20% opacity were observed, although the silos were not being loaded at that time. This condition applies to the two natural gas-fired ovens (**ID Nos. ES-01 and 03**). The facility must observe the visual emission points of these sources once per week during loading. The facility must also maintain a logbook of visible emission observations that must be submitted to DAQ in a semiannual summary report. During the

¹ Andrew Kormos (September 26, 2022)

² Andrew Kormos (September 26, 2022)

previous inspection,¹ no visible emissions were detected, and the facility's V.E. records were adequate with the most recent VE inspection occurring on September 21, 2022. Compliance with this condition was indicated and continued compliance is anticipated.

B. One flour storage silo (ID No. ES-SL3) with associated bagfilters (ID Nos. CD-SL3FFS1 and CD-SL3FFS2)

One flour storage silo (ID No. ES-SL4) with associated bagfilters (ID Nos. CD-SL4FFS1 and CD-SL4FFS2)

- 15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes - Condition states that particulate matter from any stack, vent, or outlet, resulting from any industrial process for which no other emission control standards are applicable, shall not exceed the allowable emission rates. This regulation applies to the two flour storage silos (**ID ES-SL3 and ES-SL4**) and the associated bag filters (**CD-SL3FFS1, CD-SL3FFS2, CD-SL4FFS1, & CD-SL4FFS2**). Under this condition, the facility is required to maintain monthly visual inspections of the system ductwork and material collection units. During the record review portion of the last inspection September/2022³, the facility keeps weekly records of the visual emissions, with the most recent inspections for the baghouses of ES-SL3 and ES-SL4 occurring on September 6 and August 11, 2022, respectively. Compliance with this condition was indicated and continued compliance is anticipated.

The facility is also required to perform inspections and maintenance, as recommended by the manufacturer, for the two flour storage silos (**ID ES-SL3 and ES-SL4**) and the associated bag filters (**CD-SL3FFS1, CD-SL3FFS2, CD-SL4FFS1, & CD-SL4FFS2**). The facility must also maintain a logbook of monthly visual inspections of the system ductwork and an annual internal inspection of the baghouse's structural integrity. During the record review portion of the last inspection September/2022³, the most recent internal inspection for the baghouses of ES-SL3 and ES-SL4 occurred on September 6 and August 18, 2022, respectively. Compliance with this condition was indicated and continued compliance is anticipated.

- 15A NCAC 02D .0521, Control of Visible Emissions - This facility is limited to 20% opacity when averaged over a six-minute period for sources manufactured after July 1, 1971, and 40% opacity for sources manufactured as of July 1, 1971, when averaged over a six-minute period. During previous inspection⁴, no visible emissions over 20% opacity were observed, although the silos were not being loaded at that time. This condition applies to the two flour storage silos (**ID ES-SL3 and ES-SL4**). The facility must observe the visual emission points of these sources once per week during loading. The facility must also maintain a logbook of visible emission observations that must be submitted to DAQ in a semiannual summary report. During the previous inspection,¹ no visible emissions were detected, and the facility's V.E. records were adequate with the most recent VE inspection occurring on September 21, 2022 when flour was delivered in the morning. Compliance with this condition was indicated and continued compliance is anticipated.

6. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS

³ Andrew Kormos (September 26, 2022)

⁴ Andrew Kormos (September 26, 2022)

Flowers has a natural gas-fired emergency generator (ID No. I-EG5) subject to “NSPS for Stationary Spark Ignition Internal Combustion Engines,” 40 CFR 60, Subpart JJJJ. This is an insignificant source and is included on the Insignificant Activities Table. No other emission sources at the facility are subject to New Source Performance Standards (NSPS). No other emission sources at the facility are subject to any other rules under 40 CFR Part 60.

40 CFR Part 60 Subpart JJJJ. Subpart JJJJ states that:

- The facility is required to comply with the emissions standards in Table 1 of this subpart (Per §60.4233(e)). Manufacturers are not required to certify new emergency engines to this standard but may do so on a voluntary basis per 40 CFR 60.4231(e).
- If the engine is not certified to the non-emergency engine standards, the facility must install a non-resettable hour meter. (60.4237(b))
- There is no time limit on the use in emergency situations, but the engine is limited to 100 hours per year for maintenance checks and readiness testing, and certain types of emergency demand response. The facility must record hours of operation through the non-resettable hours meter.

NESHAP/MACT

Flowers is not a major source of HAP emissions. The natural gas-fired emergency generator (ID No. I-EG5) is subject to the “NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63,” GACT Subpart ZZZZ.

40 CFR 63 Subpart 6J (National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers) is not applicable to the natural gas-fired boilers (ID Nos. IA-B1 and IA-B2) because they only fire on natural gas and are exempt per 40 CFR 63.11195(e). No other emission sources at the facility are subject to any other rules under 40 CFR Part 63.

PSD

The facility is a minor facility under Prevention of Significant Deterioration (PSD) and is not currently subject to any PSD regulations. This permit renewal does not affect this status.

112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the 112(r) thresholds. No change with respect to 112(r) is anticipated under this permit renewal.

CAM

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at major TV facilities that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

In the review for a prior permit renewal,⁵ the bagfilters (ID Nos. CD-SL3FFS1, CD-SL3FFS2, CD-SL4FFS1, and CD-SL4FFS2) on the flour silos were shown to have been pre-controlled emissions of

⁵ Jeff Twisdale (May 28, 2004)

less than 100 tons/yr. Emissions from the silos were estimated using the uncontrolled emission factor of 0.46 pounds PM₁₀ per ton cement in AP-42 Chapter 11.12, considering that cement and flour have similar properties. Each flour silo has an uncontrolled emission rate (i.e., pre-controlled) of 67.5 tons per year, based on a maximum throughput of 33.5 tons per hour at 8760 hours per year of operation. Therefore, CAM is not applicable to these sources at this facility.

7. Facility Wide Air Toxics

The facility is not currently subject to North Carolina Air Toxics regulations. This permit renewal does not affect this status.

8. Facility Emissions Review

The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2017 through 2021 are provided in the header of this permit review.

9. Compliance Status

On July 11, 2018 Flowers Baking Company of Jamestown was issued a Notice of Violation (NOV) for failing to perform a weekly visible emissions observation of silo ES-SL3 for the week of April 30-May 6, 2017. Additionally, the facility had not recorded the monthly visual inspection of the system ductwork and material collection units associated with bagfilters CD-SL4FFS1 and CD-SL4FFS2 for June 2018. This was a violation of Condition 2.1.B.2.c of Air Quality Permit 08250T07. The facility was also found in violation of Condition 2.1.B.2.e of previous Air Quality Permit 08250T06, by submitting a semiannual report stating that the facility found no deviations in their visible emissions observations. The facility's Annual Compliance Certification (ACC) was also deemed inaccurate and was a violation of General Condition 3.P of Air Quality Permit 08250T06. The facility responded to the issues in a letter addressed to the WSRO on July 30, 2018. No other actions were taken.

DAQ has reviewed the compliance status of Flowers Bakery. During the most recent inspection, conducted on September 26, 2022 by Andrew Kormos. The facility appeared to be in compliance with all applicable requirements.

10. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

11. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A permit fee is NOT required for this renewal application.

12. Recommendations

The permit renewal application for Flowers Baking Company of Jamestown, LLC located in Guilford County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 08250T08.