

Inspection Report

Source: Flowers Baking Company of Miami, LLC

Location: 17800 NW Miami Court
Miami, FL 33169

Facility Permit No.: 0250664-008-AV

Source Class: Title V
Standard Industrial Classification Code No. 2051.
The corresponding North American Industry Classification System (NAICS)
code number is 311812 – Commercial Bakeries.

Permitting & Compliance Authority

Miami-Dade County
Department of Regulatory & Economic Resources (RER)
Division of Environmental Resources Management (DERM)
Air Quality Management
701 NW 1 Court, Suite 400
Miami, Florida 33136-3912

Current Inspection: June 18, 2013 Prior Inspection: June 26, 2012

Permit Issued: March 20, 2009 Permit Expires: March 19, 2014

Inspection Type: Full Compliance Evaluation (FCE)

Inspection Frequency: Annual

Inspected By: Marta March, Engineer 1, Air Facilities Section
Claire Jordahl, Engineer 2, Air Facilities Section

Attachments Full Compliance Evaluation Checklist (2 Pages)
Full Compliance Evaluation Review Form (9 Pages)

Persons Contacted During the Inspection:

<u>Name</u>	<u>Title</u>	<u>Telephone</u>
Alex Smith	Director of Operations	305-652-3416
Kenneth Redd	Director of Engineering	
Matthew Irwin	ESS Director	

Applicable Rules:

State Rule Citations – 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297

Local Rule – Chapter 24 – Code of Miami-Dade County

Facility Description:

The Flowers Baking Company of Miami, LLC is a commercial bakery that produces bread and bread-type bun products for human consumption. Bulk quantities of flour are shipped to the facility in tank trucks and the flour is conveyed into one of four (4) storage silos. Flour is weighed and mixed with sugar, yeast, water, and other miscellaneous ingredients. This facility uses three basic types of dough mixing processes: sponge dough, straight dough, and liquid brew. These processes vary in the manner in which the various dough ingredients are mixed, which in turn determines the amount of fermentation time available. Fermentation time can vary from five hours to 20 minutes, usually averaging 2 to 2.5 hours. The bread baking process at this facility is highly mechanized and consists of three high-speed production lines.

After mixing, the final dough is transferred to make-up equipment where it is kneaded, cut to proper size, and deposited into a pan. Before entering an oven, the dough is allowed to rise in a “proof box” which has a high temperature, high humidity environment supplied by steam from two, natural gas fired boilers. Oven emissions are generated by the combustion of natural gas and off-gasing from the bread itself.

The baking of bread usually requires 15 to 20 minutes. The bun process differs from the bread production only in the make-up equipment and shorter baking times. Once the bread product exits the oven, it is allowed to cool while it is transferred via conveyor to the slicing, packaging and package labeling area to be prepared for distribution.

Enforcement Actions: Based on facility records reviewed, the facility was subject to enforcement actions as follows:

During the inspection of 10/15/2007, no records were available at the facility as required by Specific Condition No. A.5. of their Title V Air Operation Permit No. 0250664-006-AV. A Notice of Violation was sent on December 13, 2007. The facility was brought into compliance and a penalty of \$3,000 was assessed.

The facility failed to submit their Statement of Compliance (SOC) and a Notice of Violation was issued May 2, 2008. The facility submitted their SOC on May 12, 2008. A penalty in the amount of \$1,000 was assessed for this violation.

Compliance Tests: Tests are not required for this facility.

Approach to Site:

On Tuesday, June 18, 2013, Claire Jordahl, Engineer 2, Ian Campa, Summer Intern and I visited Flowers Baking Company of Miami, LLC. to conduct an annual compliance inspection of the Emission Units listed in the facility's Title V Air Operation Permit No. 0250664-008-AV and to review the facility records.

No visible emissions were observed coming out of stacks while driving around the facility.

On site, we met with Mr. Alex Smith, Director of Operations, Mr. Kenneth Redd, Director of Engineering, and Mr. Matthew Irwin, ESS Director. Mr. Irwin gave us a tour of the facility and answered most of our questions.

The facility has the following emissions units:

EU 002 – Bun Oven No. 1 Baker Perkins Model No. 970 utilizes liquid brew formulas

EU 003 - One (1) Stewart Systems, Inc., Model Type Conveyorized Bun Oven (Bun Oven No. 2) Bun Oven utilizes liquid brew formulas

- Max Heat Input: 5.75MMBtu/hr
- Max Process Rate: 9,157 lb/hr
- Max Baked Bun Production Rate: 8,241 lb/hr (36,097 tons per year)
- Direct fired, natural gas 48 MMcf/yr, two exhaust stacks 32' high 1.1' diameter

EU 007 - One (1) Baker Perkins, Model No. 970 Replacement Bread Oven utilizes straight and sponge dough formulas

- Max Heat Input Rating: 4.98 MMBtu/hr
- Max Input Capacity: 11,460 lb/hr
- Max Baked Bread Production Rate: 10,314 lb/hr
- Direct fired, natural gas 43.8 MMcf/yr, two exhaust stacks 37' high 1.3' diameter

EU 004 - Two (2) Boilers, natural gas fired Cleaver Brooks Model No. CB200-150, each with the following specifications:

- Max Heat Input Rating: 6.27 MMBtu/hr
- Max Process Rate: 6,270 scf gas/hr
- Max Gas Usage 54.93 MMcf per year
- Exhaust stack, 35' high, 1.3'diameter

The following observations were made during the tour:

The bulk flour storage system includes the four storage silos, flour recycling and conveyance that are located outside the facility. Mr. Smith stated that the trucks come in 4 to 5 times a day to fill up the silos. The flour is pneumatically conveyed inside the facility for bread production. Integral to each silo is a bin vent filter to ensure effective pneumatic conveyance of the flour. Mr. Irwin stated that approximately 100,000 lbs of flour are delivered per day which equals to approximately 3 million lbs of flour per month.

Flour is weighed and mixed with sugar, yeast, water, and other miscellaneous ingredients in the dough mixing process, followed by fermentation and baking. Oven emissions are generated by the combustion of natural gas and the bread off-gasses of ethanol, carbon dioxide, and water. Once the bread product exits the oven, it is allowed to cool while being transferred via conveyor to the slicing, packaging and package labeling area in preparation for distribution. The process now uses non-hazardous ink to label bags with the packaging date.

Bun Oven (EU002) – Baker Perkins Model No. 970 utilizes liquid brew formulas – Mr. Irwin stated that the unit has been out of service since 2008. Bun Oven No 1 was disconnected.

Bun Oven (EU003) – Steward Systems, Inc, Model Type: ConveyORIZED, utilizes liquid brew formulas.

Bread Oven (EU007) – Baker Perkins Model Number 970 Utilizes Straight and Sponge Dough Formulas.

Emission units 003 and 007 were operating and were found to be in compliance.

Engineering Shop - Two (2) Boilers (EU004) - Natural Gas Fired, Cleaver Brooks Model No. CB200-150 and Parts Washer. The units were in operation at the time of the inspection and the make, model and specs of the units were verified.

Emission unit was found to be in compliance.

I observed empty drums labeled Trough Grease L, Vegalube, Cal Therm and Exa Lube outside the facility (non-hazardous). Mr. Irwin stated that Pioneer Recycling Company picks up the empty drums.

Electronic Recordkeeping Reviewed at Mr. Irwin's Office:

Mr. Irwin showed the facility records in his computer. He had at least five years of records available in his computer. He sent one year record (from June 1, 2012 through May 31, 2013 to my e-mail address). Records included monthly bread production rates and 12-month rolling totals for the bread and bun ovens. A review of Mr. Irwin's computer data indicated that the

12-month rolling total bread production rates were 27,777.97 tons compared to the limit of 45,175 tons (combined sponge & straight dough bread); the 12-month rolling total bun production rates 12,589.56 tons compared to the limit of 36,096 tons liquid-brew dough.

Monthly and 12-month rolling totals for natural gas utilization rates for the bread and bun ovens and boilers

The 12-month rolling total natural gas rates for the ovens and the boilers are as follows:

- Bread oven - 14.36 mm cu ft (limit 43.8 mm cu ft)
- Bun oven - 12.92 mm cu ft (limit 48 mm cu ft)
- Boilers - 6.34 mm cu ft.

Total monthly and twelve (12) consecutive month VOC emissions for bread and bun ovens

The 12-month rolling VOC emissions for the bread oven was 35.35 tons (limit 121.9 tons)

The 12-month rolling VOC emissions for the combined bread and bun ovens were 60.86 tons (limit 216.31 tons).

Weekly log of meter readings for May 2013 for natural gas usage - Records were reviewed for a period of five years (Mr. Irwin's computer)

Mr. Irwin was asked to submit electronic copies of the following documents:

Monthly and 12-consecutive month rolling totals for each of the following:

- Bread oven production rate totals and by dough type (sponge & straight dough bread);
- Bun oven production rates;
- Natural gas utilization rate by user (boilers, bread oven & bun oven);
- VOC emissions rate totals and by production line (bread & bun);
- Weekly logs of meter readings for May 2013 with natural gas usage.
- Sample emissions calculations for 2012 (similar to what was submitted in 2011 for AOR)
- Emissions report for June 2012 thru May 2013.
- Material safety data sheets for "Trough Grease" and the Safety Kleen parts washer cleaning agent.
- Copy of hazardous waste disposal manifests for the parts washer solvent.

The requested electronic documents were received via email on June 19, 2013. The records were reviewed in the office.

Semiannual reports from January 1 to June 30 and July 1 to December 31, 2012 were submitted to the DERM on July 5, 2012 and January 15, 2013, respectively. The 2012 Statement of Compliance (SOC) was submitted on February 13, 2013. The Annual Operating Report (AOR) for

the year 2012 was submitted on March 1, 2013. The operating hours and annual emissions reflected in the 2012 AOR were: EU003 (6898 hours), EU004 (8760 hours) and EU007 (7510 hours), annual emissions for EU003 (VOC=27.57 tons), EU007 (VOC = 34.86 tons).

Mr. Irwin stated that Greenway Environmental, LLC. was hired by Flowers Baking Company of Miami, LLC. to prepare and submit the renewal application for Title V Operation Permit, which is due by August 6, 2013. The current Title V Operation Permit expires on March 19, 2014.

Conclusions:

Based on the observations during the inspection of June 18, 2013, and review of records received during the on-site inspection and other reports submitted by the facility, it appears that Flowers Baking is operating in compliance with the permit conditions of their Title V operation permit.

Date of Report: June 20, 2013