

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

N536527182

FACILITY: WAY BAKERY DIVISION		SRN / ID: N5365
LOCATION: 2100 ENTERPRISE DR, JACKSON		DISTRICT: Jackson
CITY: JACKSON		COUNTY: JACKSON
CONTACT: Dave Kent , Director of Engineering		ACTIVITY DATE: 09/23/2014
STAFF: Sersena White	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Announced targeted inspection of a former Rule 208a source that has demonstrated a true minor source based upon potential to emit calculations.		
RESOLVED COMPLAINTS:		

SRN: N5365

Facility Name: Aunt Millie's Bakeries

Facility Address: 2100 Enterprise Drive, Jackson, MI 49203

Facility Contact: Dave Kent, Director of Engineering

Facility Contact E-mail: DKent@AuntMillies.com

**Purpose:** The purpose of this inspection is to evaluate compliance with the Rule 201 exemptions applicable to the individual processes at this facility and to determine compliance with any applicable Federal and State Air Quality regulations.

**PPE:** The only personal protective equipment required is hearing protection. Hair nets are required and there are two forms regarding health and other safety issues that must be signed and read before entering the plant. A blank copy of Aunt Millie's Bakeries, Inc. Good Manufacturing Practices (for Visitors and Contractors) and Aunt Millie's Bakeries Health Questionnaire are attached for future reference. All jewelry must be removed and no pens or pencils in shirt pockets.

**Introduction:**

Aunt Millie's was operating under R208a source of VOC (ethanol) utilized in the baking operation. The calculated emissions have to be 50% of the threshold (50 ton per year) to comply with Rule 208a requirements. On June 26, 2014, Aunt Millie's was sent a letter notifying them of the rescinding of Rule 208a and action required of their facility. On July 15, 2014, our office received potential to emit calculations to demonstrate that Aunt Millie's is a true minor source since Rule 208a will be rescinded by early 2015.

The last inspection was conducted on June 3, 2010, by Mike Maillard and the plant was determined to be in compliance with the exemption requirements.

Aunt Millie's is categorized as a high production bakery, producing 11,000 pounds of bread per hour. This location only makes bread with a variety of additional ingredients. There are three plants located in Michigan: Coldwater (Buns), Kalamazoo (Bread & Buns including specialty items) and Plymouth (Bread & Buns). The home office and a plant are located in Fort Wayne, Indiana, which makes bread only. The other plant is located in Sydney, Ohio and makes buns only. The Jackson location operates Monday through Friday from 8 a.m. until 4:30 p.m. There is usually no production on Fridays. All of the processes are automated and nothing is touched by workers. The plant is shut down for a 24 hour period to perform maintenance and sanitation, with a minimum of 12 hours depending upon production demands.

Aunt Millie's utilize a dough/yeast rising process where ethanol emissions are generated during the baking process. All emissions are released inside the plant, with some equipment having controls depending upon the process.

This inspection was scheduled in advance in order to ensure appropriate personnel would be available to assist in evaluating compliance and to see the processes in operation. Mary Ann LaGow, Jackson District Air Quality Division secretary, participated in the inspection. We arrived at approximately 10:00 a.m. and introduced ourselves and our purpose for the visit. We were given the forms to fill out prior to entering the plant and meeting with Dave Kent, Director of Engineering. Then we went to a conference room to discuss the process of the inspection and to get a detailed overview of the process before entering the plant. I gave Dave an inspection

brochure and showed him the general outline of the inspection and pointed out the survey website on the back. He began explaining the process from raw ingredients through the sequential stages of the process. He used a plant layout diagram to help us see the relationship of the processes within the plant.

The process: The raw materials are flour (wheat and white) stored in a silo; there are yeast tanks and liquid ingredients that are stored in huts. There are a total of three (3) mixers. The first stage of the process is to make what they call the sponge dough which consists of flour, water and yeast. These ingredients are measured by scales inside hoppers before pneumatic delivery of the materials to the mixer. Time and temperature are critical parameters to ensure the dough is mixed accurately. The sponge dough sits in a trough for approximately four hours.

The sponge dough is put in a mixer where other ingredients (dry and/or liquid) are added using smaller quantities which are also measured and pneumatically delivered. After these ingredients are thoroughly mixed, the bread dough is dumped into a new trough. A robot is used to transport the troughs between the two stages of the sponge dough and bread dough racking system. The troughs weigh approximately 2000 pounds.

After the bread dough is mixed it is cut into large pieces which are auger fed to a conveyed dough balling process. Pieces of dough are cut two at a time and are shaped into balls before being dropped into an oiled bread pan.

The individual loaves are proofed using a conveying method using the internal temperature of the plant to allow the bread to rise before baking. After the proofing process is complete, the four loaf pans are automatically loaded into the rotating racks of the oven using a conveyor.

After the bread has been baked the pans are mechanically tapped to loosen the bread from the pan, then it is suctioned out of the loaf pans. The bread begins the cooling process, which is a conveyor that is approximately one mile in length. After the bread is cooled, it gets sliced before being conveyed to the bagging area which includes a twist tie on each bag.

The empty bread pans get vibrated to remove crust and crumbs before being vacuumed out with the collected particles going to internal collector that exhaust inside the plant. There are multiple lines that use the same collector.

The entire plant is under positive pressure to ensure temperature and humidity control. They use a SAP system to track production, run times, equipment failures and cripples (bread that doesn't meet quality requirements).

The tour began at approximately 10:37 a.m. We started at the beginning of the process and were conducted through every stage of the process.

#### Two gas fired boilers:

We did not observe the two boilers that are located in the maintenance room. They provide steam for the process and comfort heating. There is one natural gas meter for the entire plant. These boilers are operating under Rule 282(b)(i) exemption.

#### Proofing process:

This process uses recirculated air under positive pressure atmosphere to control the temperature inside the plant to promote the rising of the dough. This process is operating under Rule 285(dd)(ii) exemption. A glycol cooled condenser is used to cool the hot air used in the process.

#### Gas Fired Baking Oven:

We did observe the oven in operation with several racks that rotate the shelves of loaves through different sections of the oven during the baking process. This process is operating under Rule 282(a)(v) exemption.

#### Pan Cleaning process:

We did observe the pan cleaning process where the crumbs are removed from the used loaf pans and the collected material is captured and ducted to a collector that exhaust inside the plant. This process is operating under Rule 285(dd)(ii) exemption. A robot is used to maintain the flow of stacked pans to be oiled after the cleaning process.

#### Pan and Trough Oiling process:



