

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

N249128398

FACILITY: COFFEE BEANERY LTD		SRN / ID: N2491
LOCATION: 3429 PIERSON PLACE, FLUSHING		DISTRICT: Lansing
CITY: FLUSHING		COUNTY: GENESEE
CONTACT: Kevin Shaw , Vice President		ACTIVITY DATE: 01/29/2015
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of facility which was last inspected in 2008.		
RESOLVED COMPLAINTS:		

On 1/29/2015, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted a scheduled inspection of the Coffee Beanery, Ltd., as this facility had not been inspected by AQD since 2008.

Environmental contact:

Kevin Shaw, Vice President; 810-244-8155; kevins@beanerysupport.com

Facility description:

The Coffee Beanery is an importer and roaster of specialty coffee beans, from around the world.

Emission units:

Emission unit	Control device	Permit to Install No.	Operating status
Coffee roaster, Probot Model #G740	Catalytic oxidizer	340-90A	Compliance

Regulatory overview:

This facility has an air use permit, Permit to Install (PTI) No. 340-90A, for their coffee roaster, as detailed in the emission unit table. This facility is classified as a true minor source, because it does not have the potential to emit (PTE) to be a major source for criteria air pollutants. Criteria air pollutants are those for which a National Ambient Air Quality Standard (NAAQS) exists; carbon monoxide, nitrogen oxides, sulfur dioxides, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns (PM-10) and particulate matter smaller than 2.5 microns (PM2.5). A facility is considered a major source for criteria pollutants if it has the PTE 100 TPY or more of a single criteria pollutant. Also, it does not have the PTE to be a major source for Hazardous Air Pollutants (HAPs). A major HAP source has a PTE of 10 TPY or more for a single HAP, or 25 TPY or more for aggregate HAPs.

Fee status:

This facility is not considered fee-subject, for the following reasons. Because it is not a major source for criteria pollutants, it is not classified as Category I. Additionally, because it is not a major source for Hazardous Air Pollutants (HAPs), and is not subject to federal New Source Performance Standards, it is not classified as Category II. Finally, because it is not subject to federal Maximum Achievable Control Technology standards, it is not classified as Category III. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is located in a small industrial park on Pierson Place, a side road off of Pierson Road. To the immediate north in the park are other small industries. On the north side of Pierson Road is a small commercial district. To the west is a church and some small businesses.

Recent history:

After

The Coffee Beanery was most recently inspected by AQD on 11/19/2008. No problems were identified, during that inspection. No odor complaints have been received by AQD regarding this facility, since 7/25/2000.

Arrival:

Prior to my arrival, I drove on Pierson Road, past the industrial park, to check for any offsite odors. Weather conditions were 31 degrees F, cloudy, and humid, with winds out of the south southeast at 5-10 miles per hour. I detected the scent of roasting coffee beans at a level between barely detectable (level 1 on the 0 to 5 odor scale used by AQD) and distinct and definite (level 2 on the 0 to 5 scale). I then parked the state vehicle in a parking lot west of the intersection of Pierson Road and Pierson Place. When I exited the car, I could barely detect the roasting coffee bean scent. I did not judge these odors to be a problem. I drove on Pierson Place, to the Coffee Beanery's parking lot, and did not detect either odors or visible emissions.

I arrived at 9:57 AM, and met with the facility's environmental contact, Mr. Kevin Shaw, Vice President. The time and date for this meeting had been arranged in advance, following an unannounced visit I made on 12/22/2014, when Mr. Shaw was out of the office. Per AQD procedures, I presented my credentials/identification, and I provided Mr. Shaw with a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*.

During the pre-inspection meeting, Mr. Shaw explained that they would like to consider a permit revision to PTI No. 340-90A, for the purpose of revising the minimum temperature requirement for the catalytic oxidizer. They have found the unit to be very effective at combusting particulate from the roasting process at its current operating temperatures. The minimum operating temperature allowed by the PTI is 800 degrees F. They believe the unit could be equally effective at a temperature range of 500 to 700 degrees F. Mr. Shaw explained that they try to make their operations as ecologically "green" as possible, and do not want to waste fossil fuels needlessly. I indicated that I would contact one of AQD's permit engineers, to discuss this. Changing the minimum allowed temperature in the air use permit would require a permit revision.

Inspection:

Inside the plant, the aroma of coffee beans was strong, near the roaster in particular, but I did not find this odor objectionable. The scent of the numerous coffee bean varieties was not detectable at all, outside of the plant.

"Green" or unprocessed coffee beans arrive in burlap bags, from around the world. The coffee roasting process consists of a bean loader, natural gas-fired rotary oven, and storage hopper. The Probot rotary oven was operating, at the time of the inspection. There were no fugitive emissions of dust around the oven. Particulate emissions are ducted to a cyclone, and a catalytic oxidizer. The cyclone removes chaff from the airstream prior to the subsequent control device.

Data on the catalytic oxidizer was collected, as follows:

Catalyzer temperature: 883 degrees F

Catalyzer inlet temperature: 933 degrees F

Buner temperature: 422 degrees F

Bean temperature: 358.5 degrees F

There were no visible emissions from the catalytic oxidizer's exhaust outlet. The permit limits opacity to 5%. The cyclone's dust collection hopper is emptied out twice per day. The collected chaff is bagged, and placed into a dumpster, for proper disposal.

After the coffee beans are roasted, they are ground and/or packaged. A new packaging line was being installed. We also observed two existing packaging lines, one of which was currently running. I could not see any emissions of dust from the bagging process.

The company submitted a Malfunction Abatement Plan (MAP) for the coffee roasting process to AQD, on 9/20/2000. It lists daily, weekly, monthly, annual, and biannual maintenance activities. Mr. Shaw explained that they check on a daily basis the daily, weekly, monthly, and annual maintenance items, as they would not be able to run the process if any of these items were not okay at all times.

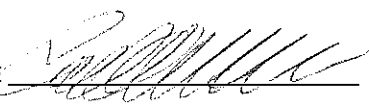
The PTI limits restricts the processing of green coffee beans to 1,500 TPY. They process about 1,000 TPY right now, with one shift per day, Mr. Shaw informed me. He indicated that if they expand to run two or three shifts per day, they would likely exceed this amount. Therefore, when they apply for a permit revision to lower the minimum temperature of the catalytic oxidizer to conserve fuel, this would be an appropriate time to apply for changing the yearly throughput limit.

The Coffee Beanery has done a number of initiatives too reduce environmental impacts, including repurposing 10,000 burlap bags/year, to avoid landfilling them. They also replaced 265 light fixtures with more energy efficient light bulbs, reducing their kilowatt usage for lighting from 200,000 kW/yr to 70,000 kW/yr.

Conclusion:

I did not identify any instances of noncompliance, nor any areas of concern. The facility was clean and neat, and facility staff were very knowledgeable and professional. I left the site at 11:00 AM.

Note: AQD Permit Engineer Andrew Drury, Acting Supervisor of the Permit Section's General Manufacturing/Chemical Process Unit, indicated that a permit revision is possible, to allow for a modification to the required temperature range for the catalytic oxidizer, as well as to allow for an increase in throughput. These proposed changes will be considered in the New Source Review process, if the company submits a permit application to modify PTI No. 340-90A.

NAME 

DATE 3/9/2015

SUPERVISOR 