

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

P064831266

FACILITY: Founders Brewing Company		SRN / ID: P0648
LOCATION: 235 Grandville Avenue SW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Chris Peters, Assistant Cellar Manager		ACTIVITY DATE: 09/16/2015
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro and Prudy Blue arrived at the facility to conduct an unannounced, scheduled inspection and met with Chris Peters, Assistant Cellar Manager, Jared Vosler, Quality Manager and Shane Dood, Maintenance Manager. The DEQ Environmental Inspections: Rights and Responsibilities brochure was provided and its contents discussed.

It was explained that due to the known emissions generated during the beer brewing process, and the recent expansions at this facility, it has become time for Founders Brewing Company to be aware of the applicable Air Quality Division regulations. The facility currently has a capacity for 600,000 barrels with plans to increase that to 900,000 barrels. One barrel of beer is equivalent to 31 gallons.

Specific air pollutants discussed were: Volatile Organic Compounds (VOC), Particulate Matter (PM), acetaldehyde (an air toxic and Hazardous Air Pollutant (HAP)) and sanitizing system chemicals for CIP system.

Having done some research prior to the inspection, staff prepared information to discuss. This information included the EPA AP-42 document on malt beverage brewing, the Rule 290 exemption forms and a copy of Rule 278a for discussion.

Mr. Vosler was familiar with the acetaldehyde and VOC emissions from the brewing, and indicated that emissions are generated during a small window of time during the fermentation phase. I indicated that I was a little familiar with the concept he was presenting, and that if he can provide a basis for that in his emissions data the AQD would accept that.

We started a tour of the facility and observed the largest cellar first. I described how the permit exemption Rule 290 works. It allows for 1,000 lbs of emissions per month per emission unit. It makes sense at Founders to consider the brewing four emission units: one for each cellar. An example of how to identify the emission units would be EUCELLAR1 and so on. Founders needs to utilize the brewing capacity of each cellar to make sure that the capacity would not generate emissions greater than 1,000 pounds of air contaminants per month. This seems likely as the emission factor is ~4.2 lbs of VOC/1,000 barrels of malt beverage produced.

The facility also needs to identify the appropriate emissions and exemption for the CIP system, as the cleaning solution includes air toxics. It is possible that the facility may use the Rule 281(e) exemption, (attached) if Founders can demonstrate that none of the material can become an air contaminant. (ie. closed loop system with reclamation) If the CIP cannot meet the Rule 281(e) exemption, information on air toxics and Rule 290 can be found here: [http://www.michigan.gov/documents/deq/deq-aqd-toxics-ITSLCAS\\_244172\\_7.pdf?20150918140537](http://www.michigan.gov/documents/deq/deq-aqd-toxics-ITSLCAS_244172_7.pdf?20150918140537).

The facility operates two natural gas fired steam generating boilers. One is a 400 HP, 16.3 MMBtu/hr Johnston boiler and the other is a 300 HP 8.16 mmBtu/hr Cleaver Brooks boiler. Both boilers are exempt from permitting pursuant to Rule 282(b)(i). The 16.3 MMBtu/hr boiler is subject to New Source Performance Standard 40 CFR Part 60 Subpart Dc for Small Industrial-Commercial-Institutional Steam Generating Units. This regulation requires that the facility submit an initial notification and keep track of natural gas usage monthly. The facility submitted the official notification immediately after learning of it on September 16, 2015.

The facility has grain handling storage equipment as well that is controlled by fabric filters as well as high level alarms to prevent overfilling. The area where the grain is received and stored was very clean, with no evidence of a particulate matter problem. This area is exempt from permitting pursuant to Rule 285(dd).

The facility does not print the labels at this facility; however they do print dates on the labels here. This usage was confirmed to be low and is exempt pursuant to Rule 287(a). During the inspection, I did not ask if they glued the labels to the bottle or not, and this should be evaluated to see if it is done on site and whether or not the glue has any VOC content.

It is recommended that Founders conduct an evaluation of the facility with regard to contaminants with its current capacity, and with the projected capacity. It must be noted that the AQD permit program is a permit to install program. This means, that if the next phase of expansion is expected to need a permit, Founders needs to apply for that permit before starting construction on the next phase.

The AQD would like Founders to provide a Potential to Emit demonstration of the facility air emissions. Information on how to do this is located at: <http://www.michigan.gov/deq/0,1607,7-135-3304-112202--,00.html>. Basically, this document helps to identify all sources of air contaminants, and shows examples of how to calculate them.

A letter will be sent out pursuant to Rule 278a requesting that Founders Brewing Company provide the AQD with information demonstrating the applicability of the exemptions to the facility. The letter will provide the facility with 30 days to submit the documentation.

We also talked about the odors associated with the brewery and that staff noted there were some in the general area as we pulled up. Rule 901 was briefly described as a complaint based rule that can help citizens that feel they are being negatively impacted by odors. (drive by odor complaints are excluded)

At the time of the inspection, it is believed that Founders Brewing Company has not exceeded any exemption limit and is therefore considered to be in compliance.

NAME 

DATE 9-21-15

SUPERVISOR PAB