DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P100058029

FACILITY: Quality Roasting, LLC		**SRN / ID:** P1000
LOCATION: 135 S. Bradleyville Road, REESE		**DISTRICT:** Bay City
CITY: REESE		**COUNTY:** TUSCOLA
CONTACT: Jeff Laverty , Site Manager		**ACTIVITY DATE:** 04/14/2021
STAFF: Benjamin Witkopp	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Inspection for PTI 61-20		
RESOLVED COMPLAINTS:		

Ben Witkopp of the Michigan Department of Environment Great Lakes and Energy - Air Quality Division (AQD) met with Mr. Jeff Laverty of Quality Roasting Inc. (QR) on April 14, 2021. QR is a soybean oil production facility which also has soy meal as a byproduct. The oil is physically extracted from soybeans and no solvents are used. The facility is covered by air permit 61-20.

The facility has 3 bins for storage, the largest being for beans that are clean and brought in from off site storage. A second bin is used for field run beans. The third bin is much smaller and is called the day bin. It is used to store beans transferred from the other two for use in production. Beans are brought in via truck. Straight trucks are far more prevalent than bottom hopper. The facility handles both conventional and organic beans.

Beans go through a crack mill to form smaller pieces which then enter a 12 mmbtu gas fired roaster. Once the beans are roasted they go into extruders. Three extruders are present though one is used as a spare when maintenance is required on one of the others. Three presses, all of which are used, follow the extruders. It should be noted the use of three presses maximizes the facility and fully utilizes the potential of the roaster. The oil is stored in tanks inside the facility. The meal is eventually routed to a meal cooler where it starts to cake up as it cools. It is routed through an enclosed hammer mill before being placed into one of three hoppers located above the meal load out area on the south side of the facility. Each hopper has two chutes from which meal is unloaded. Rubber boots are located on the bottom of the chutes and barely clear the top of the truck trailers.

AQD saw one truck being unloaded and no visibles were observed. Likewise, a truck was observed being loaded with meal and no visibles were present. Tanker trucks back into the building to be loaded with soy oil.

The permit has a requirement to document the size of small office heaters and some were checked.

There is a requirement to conduct and record non certified visual emissions observations for bean receiving under FGSTORAGE. Observations were the responsibility of Adam Sayles.

Observations concerning bean receiving are required once per week while beans are being received and loaded into the bins. The observations were being conducted. It should be noted that observations were not done with the sun at the persons back. However, doing it as they are would just make any visible emissions more noticeable. Observations were made during periods covering clean beans as well as field run. No problems were noted in the records.

FGPROCESS covers the equipment integral to extracting oil from the beans. The third press has been installed which as previously stated now maximizes the production of the plant and fully utilizes the capacity of the roaster.

Stack testing of the roaster and meal cooler was required to be completed by March 31, 2021. However, there were unanticipated difficulties installing the third press. Testing was subsequently rescheduled for April 14, 2021. Cyclonic flow was found in both of the roaster stacks therefore sampling was not conducted there. Testing was conducted on the meal cooler. I had discussions with the consultant and Gina Angelotti of the AQD technical program unit about installing straightening vanes in both roaster stacks to eliminate the cyclonic flow. Gina never heard of them but agreed they would need to be in place only temporarily to facilitate conducting the test. The consultant and I agreed upon EPA method 5d which was referenced in the following EPA document for particulate sampling in cyclonic flow https://www.epa.gov/sites/production/files/2020-08/documents/gd-

008.pdf After the testing was conducted on the meal cooler we explained the need and design to the company. The company would be fabricating and installing the straightening vanes but the new timeline for the roaster stack testing depended entirely on the schedule of the stack testing crew.

The process has limits on the amount of soybeans received and soybean oil shipped on a 12 month rolling basis. The company tracks soybean purchases and product production in a purchases / sales summary report for accounting purposes. Any time period of interest can be generated. The latest 12 months showed nearly 9.8 million pounds of soybean oil, with an additional 819,320 pounds that were organic, versus the limit of 18.72 million pounds. Again, the recent installation of the third press should result in increased production. Soybean puchases are tracked in bushels, not pounds as stated in the permit. The scale weights for soybeans received are only used for the truckers and are not used in the accounting system. However, the bushels of soybeans purchsed per time period also present the amount of shrinkage so a quick calculation using the standard of 60 pounds per bushel of soybeans results in pounds. The latest 12 months showed 1,094,761 bushels with 1,922 bushels for shrinkage resulting in 1,092,839 bushels correcting for moisture. This equates to 65,570,340 pounds. Organic beans add another 5.4 million pounds. The total beans received is then nearly 71 million pounds versus the limit of 156,000,000 pounds. Jeff indicated the market in organic material is definitely on an upward trajectory.

FG dust requires a fugitive dust plan for receiving, loadout, and roads. It also requires a loadout chute and boot system in meal loadout which were in place Dust observations were being made and recorded by Adam Sayles. The times of the observations were also quite varied to take into account various activities and conditions. The only thing absent was documentation of the application of dust suppressant which consists of a soybean oil / water solution. Jeff agreed and stated they would document such in the future therefore this is not deemed to be a violation.

The inability to perform stack testing by the date specified in the permit was due to difficulties installing the third press to maximize production capabilities. Nevertheless, a violation notice was sent to ducument the missed deadline though, given the circumstances, no reponse was required.

NAME B. Rutledge DATE 5-20-21 SUPERVISOR Chris Hare