

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

N360559759

FACILITY: KING MILLING CO		SRN / ID: N3605
LOCATION: 115 S BROADWAY, LOWELL		DISTRICT: Grand Rapids
CITY: LOWELL		COUNTY: KENT
CONTACT: James Doyle , Senior Vice President		ACTIVITY DATE: 09/09/2021
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 9:00AM on September 9, 2021, Air Quality Division (AQD) staff Dave Morgan conducted an unannounced, on-site inspection of the King Milling Company located in Lowell. The purpose of the inspection was to determine compliance with state and federal air quality rules and regulations and Permit to Install Nos. (PTI) 380-73, 123-82 , 585-83, 633-84, 671-86, 391-87, 24-89, and 808-92. Accompanying AQD staff on the inspection was Jim Doyle, Senior Vice President. All safety protocols including personal protective equipment were followed.

FACILITY DESCRIPTION

The King Milling Company is a grain elevator and flour mill started in 1884. The company processes wheat into flour, mostly white flour but some whole and cracked wheat flour. Approximately 95% of their final product leaves the facility in bulk trucks, the remaining 5% is bagged in 20 to 50 pound bags. Wheat grain is received at the A, B, and C Scale areas which include load-in operations, elevator legs and storage bins. The wheat is dried, stored, cleaned and milled. Flour production includes the A, B, and C Mills which include various cleaning, sifting, milling, conveying devices, storage bins and load out operations. Also, the company recently installed a packaging facility which is where small product bagging occurs. Some of the equipment at the facility is subject to the New Source Performance Standard (NSPS) for Grain Elevators, 40 CFR Part 60, Subpart DD and some is grandfathered and therefore not subject to the regulation. The following table lists permitted equipment and whether or not it is subject to NSPS DD.

Emission Unit	Description	PTI	SUBJECT TO NSPS DD	Comments
EUKiceDirty	Kice Dirty Baghouse Filter (milling)	380-73	grandfathered	
EUFastLoadout	Fast bulk loading	123-82	NA	
EUKices-100	FLOUR Cleaning process	585-83	NA	
EUDryer-C	COLUMN GRAIN DRYER SCALEC	633-84	YES	Removed 3/3/2020
EUKiceM288	Wheat Coarse/fine milling	671-86	YES	
EUKiceM360	Wheat cleaning	391-87	NA	
EU-Dryer-Ceres	QED COLUMN GRAIN DRYER	24-89	YES	
EUButler	Butler Drive, Storage bins, elevator legs, grain pit	808-92	NA	
EUScale B Dryer	GSI Model 7060 Column Grain Dryer	Exempt R285(2) (p)	YES	
EUScale C Dryer	Model 4742 Column Grain Dryer	Exempt R285(2) (p)	YES	
Scale A Bins	(6) concrete silos - various capacity (2) 50,000 bushel bins	grandfathered		
Scale B Bins	(4) 35,000 bushel bins	808-92		

	(6) 150,000 bushel bins (2) 400,000 bushel bins			
Scale C Bins	(2) 500,000 bushel bins	633-84		
Mill Storage Bins	(12) bins varying capacity	Exempt R284(2) (k)		
Packaging Storage Bins	(8) 50,000 lbs	Exempt R284(2) (k)		

COMPLIANCE EVALUATION

EUKiceDirty is a bag filter collector (Kice Model M96) associated with the 'A' mill and covered under PTI No. 380-73. Permit conditions include: The emission of any air contaminant which causes or will cause detriment to the safety, health, welfare or comfort of any person, or which causes or will cause damage to property or business is prohibited. Adequate exhaust ventilation must be provided to permit compliance with applicable occupational health requirements. Disposal of collected waste materials must be approved by the responsible agency. Operation of this facility will not be permitted to prevent the attainment or maintenance of applicable ambient air quality standards for any contaminant. The baghouse had a pressure drop of 3.9 inches of water column which indicated proper operation. The bag cleaning mechanism was also functioning at the time. No visible emissions were observed from the process.

EUFastLoadOut is for the bulk loading facility covered under PTI No. 123-82. Bulk loading is controlled by bin vent filters. There are four loading bins that can fill four bulk trucks each at approximately 50,000 pounds each load. There is a cloth sleeve that is used to fit around the truck loading port to minimize fugitive dust during the filling process. The storage bins are fed via a mechanical lift which is gravity fed by rail car drop point. PTI requirements are as follows: The particulate emission from the bulk loading facility shall not exceed 0.10 pounds per 1,000 pounds of exhaust gases, calculated on a dry gas basis. Compliance with this condition can only be determined by stack testing and stack testing was not required as part of this inspection. There shall be no visible emissions from the bulk loading facility. Applicant shall not operate the bulk loading facility unless the bin vent filters and dust collection bag on the bulk truck port holes are installed and operating properly. It appeared that the required control equipment was installed and operating properly. The area was well maintained and there was no track out.

EUKice-100 is for a bag filter collector associated with the wheat cleaning process covered under PTI No. 585-83. It was operating during the inspection and the pressure drop was 3.1 inches of water column indicating proper operation. No visible emissions were observed. This PTI does not contain any Special Conditions only General Conditions from 1983.

EUDryer-C covers the Scale C column grain dryer covered under PTI No. 633-84. This PTI also covers wheat storage containers (silos), a grain pit and elevator legs. Under the permit there are 0% opacity restrictions on the grain dryer and grain handling operations, 5% opacity limits for the truck unloading operation, and 10% opacity limits from the truck loading operation. The Scale C dryer was replaced in 2020 with a new dryer (**EUScale C Dryer**), with column perforations less than 0.094 inches, that is exempt under Rule 285(2)(p). The new unit, exempt from permitting, is subject to NSPS, Subpart DD because it was installed after the NSPS effective date of August 3, 1978. Subpart DD essentially consists of opacity requirements. Because the equipment was not operating during the inspection (it only operates for about three weeks in July during the wheat harvest period) and no visible emissions were observed, the equipment at the time of the inspection was in compliance. The company will need to request that PTI No. 633-84 be modified to remove this equipment from the permit.

EUKiceM288 is for a bag filter collector (Kice Model M-288) on the wheat cleaning process associated with the 'A' flour mill covered under PTI No. 671-86. This unit was operating during the inspection and the pressure drop of 3.1 inches of water column indicated proper operation.

The particulate emission rate from the wheat cleaning process shall not exceed 0.01 grains per dry standard cubic feet per minute. This limit is based on the NSPS Subpart DD. Compliance with this condition can only be determined by stack testing and stack testing was not required as part of this inspection. Visible emissions from the wheat cleaning process shall not exceed 0% opacity except as specified in the NSPS Subpart DD. No visible emissions were observed.

Applicant shall not substitute any raw materials for those described in the permit application which would result in an appreciable change in the air contaminant without prior notification to and approval by the Air Quality Division. AQD is not aware of any changes to the raw materials since the PTL was issued.

EUKICEM360 is for a baghouse control on the wheat cleaning process associated with the 'C' mill covered under PTL No. 391-87. The baghouse appeared to be installed properly but was not operating during the inspection. Per the permit, the particulate emission from the wheat cleaning process shall not exceed 0.01 grains per dry standard cubic foot. Visible emissions from the wheat cleaning process shall not exceed 0% opacity. No visible emissions were observed as the process was not operating.

EUDryer-Ceres is for a QED column grain dryer used primarily for specialty wheat products (whole grain and cracked wheat) covered under PTL No. 24-89. It was not operating at the time of the inspection. This unit is subject to NSPS Subpart DD, but because the column perforations are less than 0.094 inches there are no opacity or emission limitations on the unit from the NSPS Subpart DD. Visible emissions for the grain dryer shall not exceed a 6-Minute average of 20% opacity, except as specified in Rule 301(1)(a). There were no visible emissions as the equipment was not operating. The disposal of collected grain and/or trash shall be performed in manner which minimizes the introduction of air contaminants to the outer air. The overall facility appeared to be clean and well maintained. Applicant shall not substitute any fuel for that described in this permit application which would result in an appreciable change in the quality or any appreciable increase in the quantity of the emission of an air contaminant without prior notification to and approval by the AQD. The AQD is not aware of any fuel substitutions.

EButler is for a Butler model bag filter collector associated with the storage bins, grain pit, elevator legs and transfer spouting in the Scale B area covered under PTL No. 808-92. The bag filter collects particulate from the wheat being transferred to be cleaned. A pressure drop indicator was not required for this bag filter. At the time of the inspection, the equipment was not operating as the dryer only operates for about three weeks in July during the wheat harvest period.

EUScale B Dryer is for a column grain dryer in the Scale B area and is exempt from permitting under Rule 285(2)(p). The unit is not subject to the NSPS because it was installed prior to the NSPS effective date of August 3, 1978. At the time of the inspection, the equipment was not operating as the dryer only operates for about three weeks in July during the wheat harvest period.

It is noted that the company has a preventative maintenance program for all baghouses which includes change-out of filter bags.

Miscellaneous:
It is noted that the company reported 3.4 tons of particulate (PM10) emissions to MAERS in 2020 with annual operating hours of 7,488. Based on this information it is unlikely that the company's potential to emit for PM10 emissions would exceed the major source thresholds of 100 tons per year. No further potential to emit calculations will be required at this time.

EVALUATION SUMMARY

King Milling Company appears to be in compliance with the requirements evaluated.

NAME _____



DATE _____

9/22/2021

SUPERVISOR _____

