

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

N750963315

FACILITY: NU-WOOL COMPANY INC		SRN / ID: N7509
LOCATION: 2472 PORT SHELDON ST, JENISON		DISTRICT: Grand Rapids
CITY: JENISON		COUNTY: OTTAWA
CONTACT: Mike Steigenga , Director of Maintenance		ACTIVITY DATE: 06/22/2022
STAFF: Chris Robinson	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: FY'22 inspection to determine the facility's compliance status with respect to PTI no. 193-05 and any other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

I - Introduction

Chris Robinson (CR) from the Department of Environment, Great Lakes, and Energy's (EGLE) Air Quality Division (AQD) was on site to conduct inspections of Cellulose Materials Solutions Inc. and Nu-Wool Company Inc. on June 22, 2022. Both companies are located at 2472 Port Sheldon Street in Jenison, Michigan. Prior to entry CR surveyed the perimeter of the companies for odors and visible emissions. None were observed. Weather conditions were fair with a temperature of approximately 80°F and west-northwest winds at 10 mph (www.weatherunderground.com).

CR met with Mike Steigenga, Director of Maintenance. Proper identification was provided, and Mr. Steigenga was informed by CR that the purpose of the visit was to conduct a routine inspection. Mr. Steigenga provided a walkthrough of the facility and pertinent information regarding the process and process equipment.

II - Facility Description

The facility consists of two separate companies, Cellulose Material Solutions LLC. (CMS, SRN N7756) and Nu-Wool Company Inc. (SRN N7509). Since both companies are located in the same building, under common ownership and one receives raw material from the other, they are considered one stationary source. However, during the permitting process in 2007 the two facilities were incorrectly given their own separate SRNs. The two companies should be combined into SRN N7509 which is currently used for Nu-Wool. Since they are one stationary source applicability to all air quality rules and regulations MUST take into consideration both companies.

Nu-Wool utilizes recycled paper to manufacture mulch for hydroseeding and loose cellulose insulation. Recycled paper is ground up/shredded, then processed. A fire retardant (Sodium Polyborate CAS No. 183290-63-3) is added to the insulation before material is fed through a fiberizer. The final product is then bagged.

III - Compliance Evaluation

Nu-Wool operates under PTI 193-05. An inspection of CMS was conducted concurrently and is discussed in Activity Report CA_N775663314.

1) PTI No. 193-05

Nu-Wool operates under Permit to Install (PTI) No. 193-05 for two of the three baghouses (baghouses 1 and 2) currently in use to control particulate emissions from the cellulose manufacturing process.

The three baghouses are located inside an enclosed building/room that is vented outside by either a large power vent and/or by opening the garage bay door, which was open during this inspection. The surface area of this room was covered in accumulated dust and debris (See photos below) that appears to have originated from the baghouses. All three baghouses are pulse jet and every time baghouse 2 would pulse puffs of dust would exit the ductwork near the base of the unit. Behind baghouse 3 on the south wall was a large opening that is used to exhaust three (3) newly installed 25,000 CFM baghouses for Cellulose Material Solution's new line (Panel Line 2). Per Mr. Steigenga the floor of this area is cleaned daily. All three baghouses were operating so CR recorded the pressure drops which were as follows: BH #1 2.75", BH #2 1.5" and BH #3 2" (w.c). The company has claimed the third un-permitted baghouse (baghouse 3) to be exempt per Rule 285(I)(vi)(C) which appears appropriate. Since this baghouse is not covered in the existing PTI the permitted emission limits cannot be used to limit the potential to emit (PTE) of Particulate Matter (PM10) in determining Title V applicability.

Emission Unit EUCELLULOSE is subject to a PM10 emission limit of 2.4 pounds/hour and a PM emission limit of 0.01 lbs. per 1,000 lbs. of exhaust gas. These limits are based on proper maintenance and operation of the permitted baghouses. Observations did not indicate that the baghouses are being maintained and/or operated properly. However, at this time CR is not considering these observations to indicate an emission limit violation since minimal to no visible emissions were observed exiting directly to the outer air.

Special Condition (SC) 1.2 requires visible emissions from the baghouses to not exceed a six-minute average of 5%. CR did notice some of the finer dust exiting the building through the garage door. CR discussed this requirement with Mr. Steigenga and asked if staff are routinely monitoring stacks for visible emissions, which they are not.

Special Condition 1.3 prohibits the operation of EUCELLULOSE unless the baghouses are installed, maintained, and operated in a satisfactory manner. Puffs of dust exiting the ductwork (photos below) and the amount of dust/debris in this area is an indication that the baghouses are not being properly maintained and operated as required, which is a violation of this special condition and Rule 910 of Michigan's Air Pollution Control Rules.

In addition, Rule 370 of Michigan's Air Pollution Control Rules requires proper collection and disposal of a collected air contaminant. The large amount of dust and debris covering the surface area of the interior of this room, the ductwork issue, along with the venting of this room to ambient air through the garage door and powered building vent represents a violation of Rule 370 of Michigan's Air Pollution Control Rules.

2) Sourcewide Issues (NuWool and CMS)

At CMS, Panel Line 1 utilizes one (1) older permitted 50,000 CFM baghouse (Pneumafil) and one (1) newer unpermitted 25,000 CFM baghouse (MACT brand) baghouse. The company has not provided an exemption for the newer MACT baghouse nor has the permit been modified to include it. Panel Line 2 utilizes three (3) new unpermitted 25,000 cfm MACT brand baghouses. Nu-wool utilizes one unpermitted baghouse and two permitted baghouses. The combined CFM for the five (5) unpermitted baghouses (1 at Nu-Wool and 4 at CMS) would be approximately 125,000 CFM (25,000 CFM each). Since these baghouses are not limited by a permit, the enforceable PM limits for the baghouses is Michigan's Rule 331(1) Table 31(J) of 0.1 lbs. PM per 1,000 pounds of exhaust gas.

Based on this limit, the potential to emit would equal approximately 265 tons per year. The Title V applicability threshold for PM10 is 100 tons per year. Any source that has a PTE of greater than Title V Thresholds needs to either operate as a Title V source or obtain an Opt-out permit with enforceable restrictions to limit the facility wide PTE. It is AQD's recommendation that Nu-Wool/CMS obtain a Title V Opt-out Permit.

IV - Compliance Determination

Based on the observations and discussions during the inspection Nu-wool is not operating in compliance with applicable air quality rules and regulations. Specifically, not properly operating or maintaining the baghouses is a violation of PTI SC 1.3 which is also a violation of Rule 910. In addition, maintenance issues combined with venting of this area to the outer air constitutes a Rule 370 violation. A violation Notice will be issued.



Image 1(Nu-Wool) : General baghouse room conditions (accumulation of material on the floor)



Image 2(Nu-Wool) : General baghouse room conditions (accumulation of material on the walls)



Image 3(Nu-Wool) : Location of garage door



Image 4(Nu-Wool) : Leaking ductwork wrapped in cardboard



Image 5(Nu-Wool) : General baghouse room conditions (accumulation/piles of material under the baghouses)



Image 6(Nu-Wool) : General baghouse room conditions (accumulation of material on gauges)

NAME *[Signature]*

DATE 8/2/2022

SUPERVISOR *[Signature]*