



- Cellulose Insulation
- WALLSEAL Insulation
- Hydroseeding Mulch

August 19, 2022

Mr. Christopher Robinson, Environmental Quality Analyst
EGLE-AQD, Grand Rapids District Office
State Office Building
350 Ottawa NW, Unit 10
Grand Rapids, Michigan 49503-2341



Re: Violation Notice (SRN: N7509)
Nu-Wool Company, Inc.

Dear Mr. Robinson,

This letter is in response to the violation notice (VN) written by you, dated August 2, 2022. The referenced VN, cited the company with being in violation of two permit conditions associated with PTI #193-05.

- Improper operation and maintenance of a control device (S.C. 1.3)
- Improper collection and disposal of an air contaminant (G.C. 12)

Accompanying this letter was your EGLE staff activity report, which provided a list of the issues, as observed during the June 22, 2022 inspection. The violations identified in the VN and described in the staff activity report involve the three dust collection units (BH-1, BH-2, and BH-3) associated with Nu-Wool processing activities. These units are used to recover airborne cellulose materials from material handling cyclones located at various stages of processing.

As you are aware, Nu-Wool processes and recycles newsprint into shredded insulation materials. In the process cellulose dust is generated. The cellulose entrained air is directed to one of the three baghouses, the cellulose material is captured from the airstream and the materials are re-inject back into the process. The goal is to retain as much production grade cellulose material as possible.

Production typically operates from 5am – midnight, with a cleanup crew working to inspect the baghouses and clean the baghouse room before the next business day. Cleanup involves removing accumulated cellulose dust from within each dust collector, replacing filters as needed, and blowing down material that has bridged within the units and vacuuming the floor area of any released material. This cleaning procedure is done to reduce the likelihood of cellulose bridging within the dust collector. By performing daily cleaning, we are able to address potential internal mechanical issues before they become a critical issue.

Special Condition 1.3

On the day of your visit, the return line below Baghouse #2 (BH-2) had a break about 2 - 3 feet down stream of the dust collector bottom hopper (in the cellulose material return line). As you noted

in your staff activity report, when the air cleaning device pulsated, cellulose dust was observed leaving this section of duct. This has been repaired effective July 22, 2022.

General Condition 12

At the close of production (midnight) all production processes are shut down with the exception of the loose cellulose baghouse collectors. The air cleaning of the baghouse filters continues for another 30 minutes in order to purge the bags of any residual cellulose prior to the daily unit inspection. The residual collected cellulose drops into the lower section of the baghouse (collection hopper) where it is typically drawn out by process fans, located downstream. However, during this final air purge of the bags, after production has ceased, the associated air handling systems are shutdown and the final collected cellulose remains in the hopper, above the lower air lock, which has closed.

With the lower air lock closed the end of production bag cleaning process results in a pressurization of the baghouse and the remaining fine cellulose material, contained within the hopper is forced out around the lower air lock seals and onto the floor. This does not occur during normal operation of the baghouse, when EUCELLULOSE is in operation. Instead, it occurs when EUCELLULOSE is not operating and the baghouses are going through a 30-minute, final bag cleaning.

The cleanup typically during the shutdown to allow for routine inspection and manual cleaning of the hoppers. Due to the collected cellulose in the bottom of the hopper, cleaning involves opening up each baghouse by way of access panels in the lower hopper, cleaning out the remaining cellulose, inspecting the bottom hopper of each baghouse for bridging, blowing down bridged cellulose that could plug the baghouse, inspecting the sock filters, and finally cleaning up the floor of the accumulated cellulose debris. Unfortunately, on the day of your visit, the cleanup crew had not completed the required post-inspection cleanup of the area and a large maintenance access garage door was left open. The crew did return later and completed the cleaning of the debris from the floor and reminded that the maintenance access door is required to be closed.

As a follow-up to this response, we are reviewing our housekeeping procedures to identify methods to minimize the release of collected cellulose during our cleaning operation. One operational issue identified is the exhaust from CMS Panel Line #2 which discharges into the Nu-Wool baghouse room during the warmer months. This exhaust is typically diverted to the Panel Line #2 production area during the winter months for heat recovery and conservation of energy. We have elected to permanently divert this exhaust duct from discharging into the baghouse room and instead permanently return the cleaned air to the Panel Line #2 production area. We will lock out the damper position so that it cannot exhaust into the baghouse room. This should eliminate the over-pressurization of the Nu-Wool dust collector room.

Facility Description and Source Designation

The staff activity report identifies the production complexity of two (2) separate companies located in the same building under common ownership, with one company receiving raw material from the other. However, we disagree with your determination that "they are considered one stationary source..." and "...the two facilities were incorrectly given their own separate SRNs".

In addition to spatial proximity and the organizational relationship, there are two (2) final steps in the process for a Stationary Source Determination (AQD-011). Steps 3a and 3b include the review of the Standard Industrial Classification (SIC) codes associated with the primary activities and a review of the support offered to each other's primary activity.

AQD-011 policy states that when determining the industrial grouping relationship, the first two digits (Major Group) of the SIC code for each source's primary activity must match. Even if the first two digits match, there must be a determination as to the extent of support or reliance/interdependency between each source for providing to the other's primary activity.

- 3a. Nu-Wool operates under SIC code 2679 for Converted Paper and Paperboard Products not Elsewhere Classified, while the CMS primary activity falls under SIC code 2299 for non-woven fabrics. The two (2) digit major group codes **do not** match.
- 3b. The panel lines for CMS utilizes cellulose fibers manufactured by Nu-Wool. However, the dependency does not meet the requirements specified in AQD-011. The following table provides a demonstration of the level of support offered to each organization.

Company	2021 Total Fiber Production (lbs)	2021 Cellulose Fibers to CMS (lbs)	2021 Total Fibers Purchased (lbs)	2022 Total Fiber Production Through May (lbs)	2022 Cellulose Fibers to CMS (lbs)	2022 Total Fibers Purchased through May (lbs)
Nu-Wool	50,820,650	2,279,931		21,796,825	958,093	
		(4.5%)			(4.4%)	
CMS		2,279,931	9,218,613		958,093	3,686,245
		(24.7%)			(26.0%)	

The transfer of cellulose fibers amounts to 4.5% of the business associated with Nu-Wool and 26% of the material needs for CMS. While they are contained under a single building structure, the leases are separate, as are the utilities. Therefore, the only measure of support is the material transfer of cellulose fibers. AQD-011 states that buildings, structures, facilities or installations are considered to support the primary activity if at least 50% of their output is dedicated to the primary activity. The policy also states if any of the above criteria do not apply, the entities should be treated as separate stationary sources. We note this policy direction is consistent with previous EGLE determinations, including the assignment of separate Source Registration Numbers (SRNs).

The 2007 air permit application for CMS Panel Line #1, clearly identified the two companies as sister organizations, to be located within the same building and that Nu-Wool would be providing some of the required materials to CMS. So, there was a clear indication, on the part of CMS, to fully disclose its relationship with Nu-Wool. However, the Grand Rapids District Office of then MDEQ-AQD, in coordination with the Permit Section made the determination of separate companies requiring separate Source Registration Numbers. We believe that their determination was based on the full use of AQD-011 and is not an error.

Site-Wide Emission Limit

We recognize that we have added a third baghouse dust collector, which impacts our facility-wide emissions. To minimize the potential impact, we are open to adding a site-wide limit for PM10 to limit our potential-to-emit below major source threshold for the Nu-Wool facility.

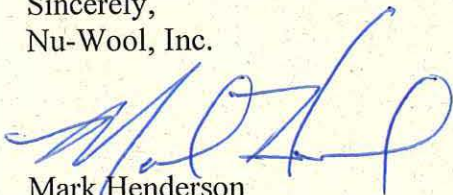
Summary

The violation notice identified two (2) violations. The first reported violation is listed as a violation of Special Condition 1.3, which states, *the permittee shall not operate EUCELLULOSE unless the baghouses are installed, maintained, and operated in a satisfactory manner*. Baghouse number 2 (BH-2) was found to have a tear in the post-baghouse ductwork leading back to the production area. During periods of bag cleaning, the pulsating air would pressurize the duct and release cellulose dust. This has been repaired.

The second violation identified improper collection and disposal of air contaminant, citing General Condition 12 and Michigan Air Pollution Control Rule 370. On the day of your visit the baghouse room cleaning had not been completed and a garage bay door was open. The cleaning of this room was completed later that day and the staff reminded that the maintenance access garage door must remain closed. In addition, we are evaluating our routine maintenance procedures in an effort to minimize the release of cellulose materials, that could otherwise be used as product. CMS is also evaluating redirecting the Panel Line #2 exhaust back into the Panel Line #2 production area, which will alleviate the pressurization of the baghouse room.

Finally, we are open to submitting an air permit application, to establish facility-wide limits for particulate that would limit Nu-Wool's potential below major source thresholds for PM₁₀. Should you have any questions, please feel free to contact me either by phone at 616-669-0100 or by e-mail mjhenderson@nuwool.com.

Sincerely,
Nu-Wool, Inc.



Mark Henderson
President

cc: Ms. Mary Ann Dolehanty, EGLE-AQD
Dr. Eduardo Olaguer, EGLE-AQD
Mr. Chris Ethridge, EGLE-AQD
Ms. Jenine Camilleri, EGLE-AQD
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