

Subject: Violation Notice, U422100057, from EGLE AQD on 12/8/2021

Dear Mr. Scanlan,

This letter will explain our position and our continued efforts to reduce odors from the Neuvokas manufacturing facility in Ahmeek, MI. This response continues the efforts that were described in the letter dated 8/27/2021 and the email follow-up that was sent on 10/6/2021. We continue to stand by our commitment to take this issue seriously. We want this area to be a desirable place for everyone to live and work and to keep this trend we have begun community outreach to address concerns and express our continued progress to improve this issue.

Our manufacturing has continued to increase with more shifts coming online and we are currently processing about 600,000 lbs of fiber and resin each month. The DCPD resin system that we are using has odors that can be picked up by the human nose at the parts per billion level.

Attached to this letter is a facility layout with odor sources and our current ventilation methods. Since we started with this resin system in January of 2020, we have worked to constantly improve our ventilation methods, we have learned a few things along the way. Our focus to-date has been improving our ventilation system to discharge odors at a higher elevation with increased velocity.

We did bring our resin supplier on-site in December to discuss odor issues. The major recommendations follow what we have done to-date to get the odors as high as possible. They have made some general recommendations on using carbon filters to capture odors before they enter the discharge air. This will be discussed in the Action Items below.

We have invested a considerable amount of funds into this issue and we will continue to do so. Our areas of focus are listed below.

#### **Action Items Moving Forward**

1. We have one stack that has not been converted to a high velocity fan. To complete the conversion of the final stack we have another fan on order. This fan will arrive in January and we will be installing this into Stack 1. Each of these fans costs us about \$5,000 to purchase and several thousand more to install
2. This coming summer we are looking to install a fifth stack that will be located in the center of our facility. This stack will also have a high velocity fan and the goal will be creating a negative air pressure in the facility at all times. This means anytime a door opens air enters the facility and stray odors will be drawn into the system to be expelled at high velocity through the new stack
3. We have a large intake style fan coming early in January that we can use to further increase our air intake into the facility. This will ensure our exhaust fans work as effectively as possible

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4. We are considering adding carbon filters in-line to our ductwork to remove odors before they are discharged. This type of carbon filter can be seen in the image below. This will be effective to remove the odors, but we do not yet know how often these will have to be changed and refreshed. We would need to select a size filter and then design a method to install these in our ductwork. We will determine if we need to go down this path as we monitor the overall effectiveness of current mitigation efforts over time
5. Another option that we are investigating is a scrubber/afterburner that would have the ability to treat all of the discharge air in our facility. This is still early and we are working to determine the design and cost of such a unit. With this type of unit, the entirety of discharge air would pass through the unit before entering our stacks. It would have to be determined if multiple units would make sense or if center unit could feed a single stack.

We do hear the conversations around the area about odors from our facility and we are using continuous improvement to reduce the odors. Please reach out at any time with questions, comments, or concerns.

Thank you and sincerely,

A handwritten signature in black ink, appearing to read "Matt Kero".

Matt Kero

VP of Engineering

Neuvokas Corporation

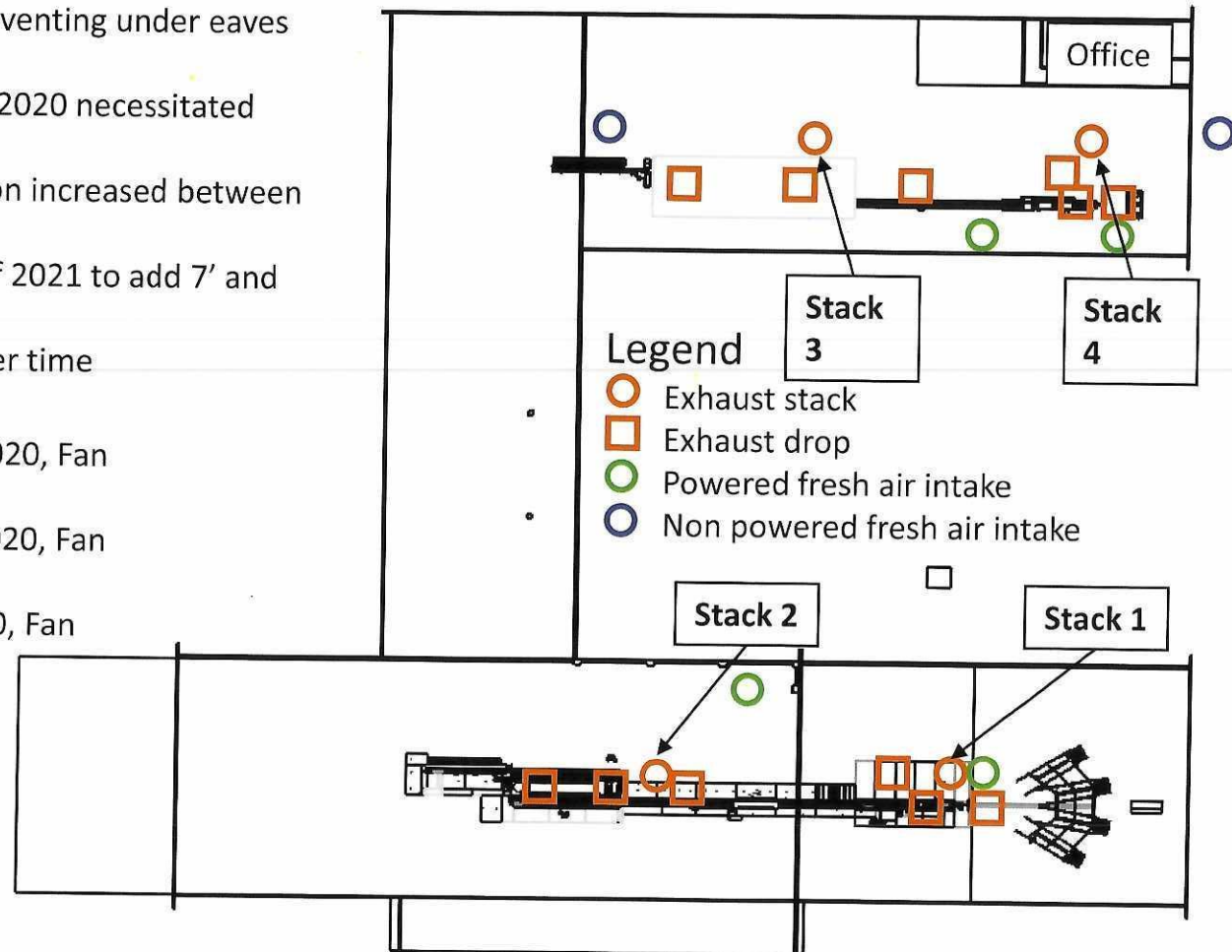
906-934-2661

Attachments: Description and Pictures of current ventilation system.

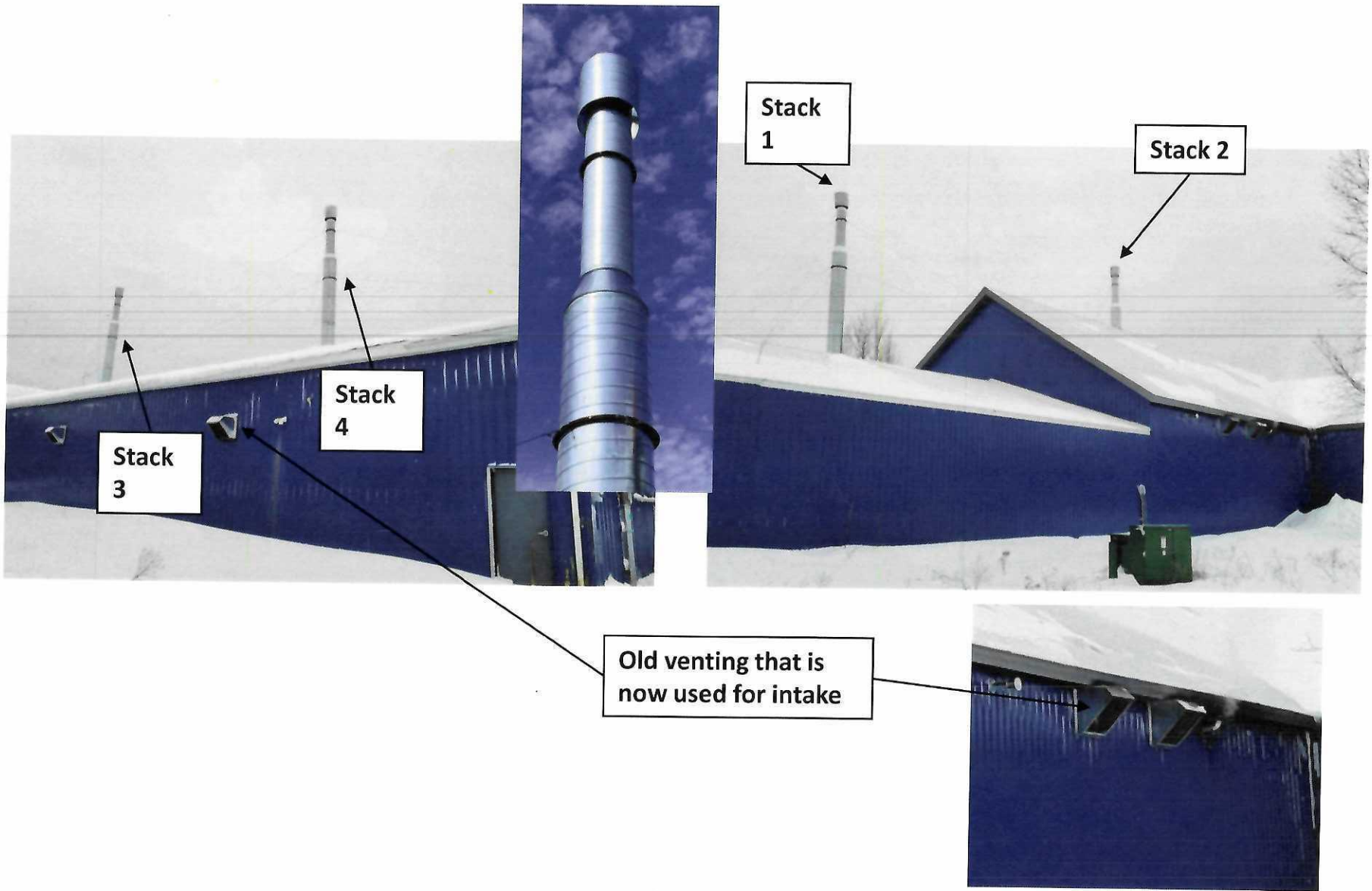
# Facility History and Overview

Original design from 2015 was venting under eaves of the facility

- Resin change in January of 2020 necessitated updates to ventilation
- Stacks installed as production increased between both production lines
- All stacks updated in June of 2021 to add 7' and install high flow tips
- High velocity fans added over time
- **Stack 4** - Installed August 2020, Fan upgrade Dec 2021
- **Stack 3** – Installed August 2020, Fan upgrade Sept.2021 2021
- **Stack 2** – Installed May 2020, Fan upgrade August 2020
- **Stack 1** - Installed May 2020



# Facility Stacks



# Stack 1 and 2 Ductwork



Venting that is currently feeding into Stacks 3 and 4



# Stack 1 and 2 with ductwork



Stack 2

Stack 1



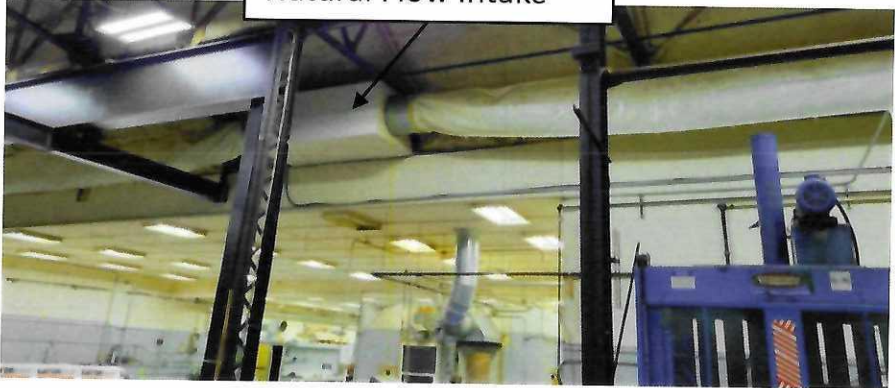
# Facility Air Intake



Powered Intake



Natural Flow Intake

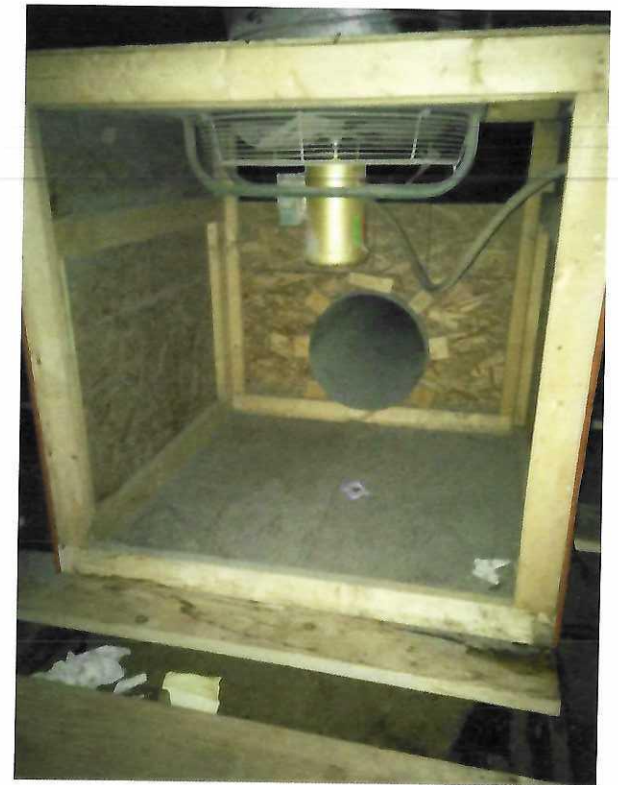


# High Velocity Fan Details

Original Exhaust Fan – Rated for a high CFM but it was learned that these fans do not handle the static that resulted with increased stack high

Stacks are mounted to the top of plywood boxes and various ductwork comes into these plywood boxes

Four stacks leave facility and each is set up this way





# High Velocity Fan Details

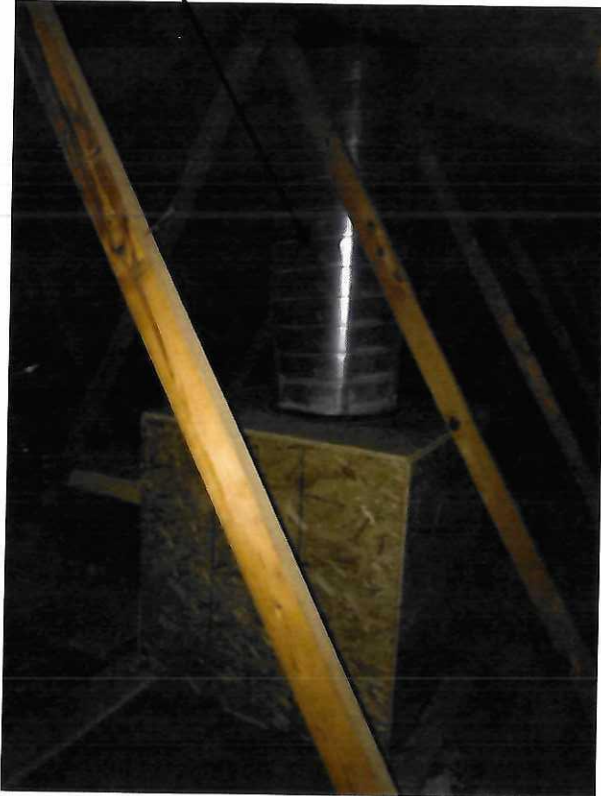
New exhaust fans. We are replacing all old exhaust fans with these high velocity, high CFM fans that handle higher static pressures

New fan installed  
into ductwork  
system



# High Velocity Fan Details

Base of roof stack



Fresh air intake allows fan to operate at high speed while bringing in fresh attic air to dilute overall exhaust air



Fresh Air Intake