



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Vibrantz Technologies, Ashtabula, Ohio

FROM: Meaghan Pashen, Environmental Engineer
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Vibrantz Technologies

Facility Location: 2600 Michigan Avenue, Ashtabula, OH 44004

Date of Inspection: March 23, 2023

EPA Inspector(s):

1. Meaghan Pashen, Environmental Engineer
2. Valeria Apolinario, Environmental Engineer
3. Laura Neudorf, Environmental Engineer

Other Attendees:

1. Anthony Noxon, EHS Lead
2. Todd Pew, EHS Manager

Contact Email Address: Todd Pew: todd.pew@vibrantz.com; Anthony Noxon: anthony.noxon@vibrantz.com

Purpose of Inspection: To investigate facility compliance with synthetic minor source permit conditions, including volatile organic compound (VOC) and hazardous air pollutant (HAP) emission limits.

Facility Type: Paint and coating manufacturing

Facility Name: Vibrantz Technologies
Facility Location: 2600 Michigan Avenue, Ashtabula, OH
Date of Inspection: March 22, 2023

Regulations Central to Inspection: The Federally Enforceable Permit-To-Install and Operate (FEPTIO) conditions, including but not limited to the obligation to emit less than 99.9 tons/year of VOCs, and less than 24.9 tons/year of HAPs.

The facility's FEPTIO states "the acceptable range established for the pressure drop across the dust collector (DC007) is between 0.5 to 6 inches of water". The facility's FEPTIO P0123420 states "the acceptable range established for the pressure drop across the dust collector (DC004) is between 2 to 8 inches of water". In both FEPTIOs, it states, "the permittee shall record the pressure drop across the dust collector (DC007/DC004) on a daily basis" and "the emissions shall be vented to a dust collector (DC007/D004) at all times the emissions unit is in operation" for all associated emissions units.

Emissions unit MX007 (Mixer #7) is controlled by dust collector DC004 and MX011 (Mixer #11) is controlled by duct collector DC007. Both FEPTIOs state the following operational requirement: "use of mixing tank covers with proper ductwork, sufficient to draw a vacuum, pulling PE to the dust collector".

Arrival Time: 1:15 PM

Departure Time: 4:15 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Provided with Inspection Report
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Anthony Noxon or Todd Pew unless otherwise noted.

Company Ownership: In 2021, Chromaflo Technologies Corporation (former facility name) merged with two other companies to form Vibrantz Technologies. This facility is specifically a Vibrantz Technologies - Color Solutions facility.

Process Description:

Vibrantz Technologies (Vibrantz or facility) manufactures dry pigments and liquid dispersions. Raw materials include resins, additives, and pigments. Raw materials are mixed in pots, which are partially covered with lids. There are about 25 to 30 mixers. There are mixers that contain

just liquid materials, and just dry powder. Dry materials are dumped into respective pots, and liquid materials are piped into respective pots. There is a white mixing area, a mixing area, and a solvent area. Emissions from the white mixing and the mixing area are routed to dust collectors (DC004 and DC007, respectively). Emissions from the solvent area go to the facility exhaust system.

Pots are cleaned in between batches in a water-based pot wash system. After mixing, materials are sent to milling. There is a non-hazardous milling area, and a hazardous milling area. Submersible basket mills break down particle size.

The solvated cellulose acetate butyrate (CAB) production line utilizes hardened chips as raw material, which are then mixed with solvents. The CAB line consists of a solvating mix tank, a holding tank, a vertical sand mill, and a thinning tank. Emissions from the CAB line area are routed to a dust collector (DC007).

Staff Interview:

In 2022, facility throughput was about 14 million pounds. Emissions calculations are based on material usage and emission factors based on VOC emissions rate per hour. Material usage is automated and tracked at each process step utilizing weight measurement and material specifications. Facility emission calculations for VOCs assume complete volatilization of components and there is no control or capture. EPA requested facility emission calculations, material safety data sheets, and material usage.

There is an indoor storage tank farm on-site containing 13 fixed roof tanks with material used in facility operations. Four of the tanks contain solvent, and nine of the tanks contain resin. One 12,000-gallon tank contains styrene, and the remaining 12 are 8,800-gallon tanks.

Dust collectors are only operated during the addition of dry material. The dust collectors have magnehelic gauges, and differential pressure is recorded daily. Operating parameter limits are based on manufacturer's recommendations. Deviations are reported to Ohio EPA; however, no deviations were reported to Ohio EPA in the last five years. Dust collectors are inspected quarterly for preventative maintenance. EPA requested daily maintenance and differential pressure logs from each dust collector, including documentation of any time periods when the baghouse was not in service when the respective emissions unit was in operation. EPA requested the most recent performance test for each dust collector including the manufacturer's recommendations that established the respective differential pressure range.

There is no Leak Detection and Repair (LDAR) program at the facility. A combustible gas reader is used, as well as low level vapor monitors. The low-level vapor monitors are calibrated quarterly. Facility staff did not recall any recent odor complaints from the community.

The facility is undergoing a construction project to add two mixers, a mill, and a holding tank. These units are not yet in operation, and no permit has been applied for considering these units.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

The CAB production line was not in operation during the inspection.

EPA visualized emissions from mixing and milling operations at Mixer #7, Mixer #11, Mixer #22, Mill #24, and Mill #6. These operations are partially covered. See Digital Image Log.

EPA observed the tank farm. There was a dent in the roof of the styrene tank. See Digital Image Log. No emissions were visualized from the styrene tank with the FLIR camera.

EPA observed tank farm pressure relief valves and facility exhaust systems on the roof. No emissions were visualized with the FLIR camera.

DC004 was not in operation during the inspection. DC007 was not in operation during the inspection.

Photos and/or Videos: were taken during the inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Emission calculations, including all calculation methodology, emission factors, and assumptions for the past 3 years;
- Safety data sheets for each raw material brought on-site, including pigments, resins, and solvents, in the last year that contains VOC or HAP material, including metal HAP (cadmium, chromium, lead, and nickel);
- Daily maintenance and differential pressure logs from each dust collector, including documentation of any time periods when the baghouse was not in service when the respective emissions unit was in operation, for the past year;
- Most recent performance test for each dust collector, if applicable, including the manufacturer's recommendations that established the pressure drop range;
- Provide any communication with Ohio EPA that established the dust collectors may be turned off after the addition of dry powders;
- Solvent usage for the past year, separated by solvent type;
- Resin usage for the past year, separated by resin type.

Compliance Assistance: EPA expressed that the facility's permits state that emissions are to be vented to emission control equipment when associated emission units are in operation.

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Concerns: EPA expressed concerns related to emissions visualized on the FLIR camera from mixing and milling operations due to partial coverings. EPA expressed concerns related to DC004 and DC007 not being in operation during associated emission unit operation.

DIGITAL SIGNATURES

Report Author: **Pashen,
Meaghan**  Digitally signed by
Pashen, Meaghan
Date: 2023.05.16
16:50:34 -05'00'

Section Supervisor: **Brian
Dickens**  Digitally signed by Brian
Dickens
Date: 2023.05.17
06:35:06 -05'00'

Facility Name: Vibrantz Technologies
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APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Log

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Laura Neudorf	2. Archival Record Location: Region 5 Electronic Records Center
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	IMG_0343.JPG	*	Pots before milling
2	IMG_0344.JPG	*	Fixed roof of tank with vapor space pipe
3	IMG_0345.JPG	*	Dent in roof of styrene tank
4	IMG_0346.JPG	*	Dent in roof of styrene tank
5	IMG_0347.JPG	*	DC004 differential pressure gauge
6	IMG_0348.JPG	*	White mix room
7	MVI_0349.MP4	*	Digital video of Mixer #11
8	IMG_0350.JPG	*	Mixer #11 and DC007
9	IMG_0351.JPG	*	DC007 differential pressure gauge
10	IMG_0352.JPG	*	Batch routing/specification label
11	IMG_0353.JPG	*	Low explosive limit (LEL) monitor gauge in hazardous mixing area
12	IMG_0354.JPG	*	LEL monitor gauge in hazardous mixing area
13	IMG_0355.JPG	*	Batch distillation and distillation product tank
14	IMG_0356.JPG	*	Facility map with emission units
15	IMG_0357.JPG	*	Facility map with emission units
16	MOV_3066.mp4	*	FLIR video at white room Mixer #7
17	MOV_3067.mp4	*	FLIR video at Mixer #11
18	MOV_3068.mp4	*	FLIR video at Mill #24
19	MOV_3069.mp4	*	FLIR video at Mill #6
20	MOV_3070.mp4	*	FLIR video at Mixer #22

*Date and Time metadata did not preserve from digital camera.