

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N087854778

FACILITY: HAVILAND ENTERPRISES, INC		SRN / ID: N0878
LOCATION: 421 ANN ST NW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Brittany Albin , Environmental Engineer		ACTIVITY DATE: 08/04/2020
STAFF: Kaitlyn DeVries	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The purpose of this inspection was to determine compliance with Permit to Install (PTI) No. 71-17E, Consent Order AQD-2018-01 and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

On Tuesday August 4, 2020 Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) Staff Kaitlyn DeVries (KD) and Materials Management Division (MMD) Staff Wade O’Boyle (WO) conducted an announced, scheduled inspection of Haviland Enterprises located at 421 Ann Street (East Building), 521 Ann Street (West Building) and 2168 Avastar Parkway (North Building), in Grand Rapids and Walker, MI. The inspection was announced to the facility in order to ensure proper safety measures could be taken as required by executive orders from Michigan’s Governor to prevent the spread of COVID-19. The purpose of this inspection was to determine compliance with Permit to Install (PTI) No. 71-17E, Consent Order AQD-2018-01 and other applicable air quality rules and regulations.

KD and WO arrived in the vicinity of the site around 9:15 am and surveyed the area for odors and opacity prior to entering the building; none were noted. Additionally, upon arrival EGLE staff completed the required health questionnaire required by the facility for the prevention of the spread of COVID-19. EGLE staff then met with Mr. Ben Gaeth, Vice President of Haviland Enterprises, Mr. Josh Mueller, Environmental Health and Safety Manager, and Ms. Brittany Albin, Environmental Engineer, who accompanied Staff on the inspection of the facilities. During the inspection, proper PPE was worn, including facial coverings and social distancing was practiced.

Facility Description

Haviland Enterprises, Inc. (Haviland) receives, repackages, blends, and dilutes various products including caustics, phosphates, acids, bleaches, and algacides. The main facility is comprised of an east campus, a west building, and a north building. The east campus has several buildings located on the vicinity including the corner building, the former Swagelok building (discussed further below), the laboratory building, west building (of east campus) and several rooms within the main building.

Regulatory analysis

Haviland currently has one (1) air quality permit, Opt-Out PTI No. 71-17E. Haviland also relies on Rule 201 permitting exemptions for much of the facility; more specifically Rule 290 and Rule 291 are used for a majority of the processes. KD discussed the possibility of Haviland being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart VVVVVV for Chemical Manufacturing Area Sources as well as 40 CFR Part 63 Subpart BBBB for Area Sources: Chemical Preparations Industry. KD previously requested that Haviland make an applicability determination as a part of the Fiscal Year 2019 Inspection but had not yet received that information. KD again asked this question and Ms. Albin indicated that Haviland thinks there may be some processes subject to this regulation, specifically VVVVVV, and they are currently working with a consultant on this issue. KD will continue to follow up with Haviland Staff on the applicability of this regulation.

Haviland is currently a synthetic minor source of Volatile Organic Compounds (VOC’s) and Hazardous Air Pollutants (HAPs). Haviland is also under Consent Order (CO) 2018-1 with AQD. During the closing meeting, Mr. Gaeth asked about the requirements for terminating the CO. KD explained that a written request would be required and would not be evaluated until the minimum term of the CO.

Compliance Evaluation

PTI No. 71-17E

EUCHROME BLEND

This emission unit covers the chrome blending process located in the manufacturing area of the East building. The process consists of a blending tank, a blender, a reactor, a sparger, and treatment tanks. Emissions from the blending tank, the blender, the reactor, and the sparger are controlled by a wet scrubber. Per Mr. Gaeth, the sparger has not been in operation in some time. The area was not in production at the time of the inspection.

Particulate Matter (PM) emissions are limited to 0.01 gr/dscf and to 0.17 pounds per hour (pph). PM₁₀ and PM_{2.5} emissions are also limited 0.17 pph, individually. While PM, PM_{2.5}, and PM₁₀ stack testing has not been requested at this time, Haviland is tracking PM₁₀ and PM_{2.5} emissions in order to demonstrate compliance with these limits. The highest daily PM emissions were 0.015 pph, from August 26, 2019. The PM_{2.5} Toxic Air Contaminants (TACs), and the PM₁₀ TACs are limited to 1.6×10^{-21} pph and 0.17 pph, respectively. These limits are also based upon stack testing and the TACs are defined as part of PTI No. 71-17E EUCHROME BLEND Special Condition I.5 and I.6 footnotes b and c. Haviland is properly tracking the baseline emissions of each of these TACs with the highest emitted at 4.63×10^{-3} pph. Hexavalent chromium is limited to 6.07×10^{-6} pph. The most recent stack test conducted in July 2018 indicated a Hexavalent chromium emission rate of 6.07×10^{-6} pph. The emission limit was established based upon the stack test. Total fluoride emissions, which applies to the combination of all fluoride compounds, is limited to 9.19×10^{-5} pph, based upon stack testing. Stack testing for fluoride compounds is not being requested at this time.

As part of the Malfunction Abatement Plan (MAP), Haviland is tracking the differential pressure of the scrubber. Records indicate the scrubber operates around 0.5 inches water column (WC). Haviland also tracks other operational parameters of the scrubber including the recirculation flow rate. If Haviland is processing any product in this area, the scrubber becomes inaccessible, without proper PPE. Since no manufacturing was occurring at the time of the inspection, the scrubber was accessible, and indicated that it was operating at a pressure drop of 0.51 inches WC.

The stack parameters, while not explicitly measured, appeared to be of correct dimensions. The rooftop was accessed during the inspection and no scrubber operational issues were noted.

EUCORNERSCRUB

This emission unit covers the bagging and blending process located in the corner building of the East Campus. This line processes nickel containing compounds and consists of two (2) baggers and a fill line. The emissions from the baggers and the fill line are either controlled by a wet scrubber or are internally vented to a portable dust collector, depending on the materials being processed. Other equipment is also located in this building but will be discussed later in this report in the miscellaneous exempt equipment section, under the corner building.

Table 1 outlines the emission limitations for this emission unit, including the observed values. Testing may be required to verify the emission rates of nickel, total nitrilotriacetic acids, total persulfates, PM, PM₁₀, and PM_{2.5}, but testing has not been requested at this time.

Table 1: Emission limits for EUCORNERSCRUB

Pollutant	Limit	Observed Value	Notes
PM	0.01 gr/dscf	Verifiable through stack testing.	Stack testing not requested at this time.
PM, PM ₁₀ , and PM _{2.5}	0.12 lb./hr	0.064 lb./hr	Limit applies to each, individually. Highest observed value from March 21, 2020
Nickel	1.78 x 10 ⁻³ lb./hr	1.78 x 10 ⁻³ lb./hr	This limit is for Nickel and Nickel containing compounds, and is a baseline calculation based upon the nickel content of the products produced.
Total Nitrotriacetic acids	3.0 x 10 ⁻⁵ lb./hr	3.0 x 10 ⁻⁵ lb./hr	Baseline Calculation
Total Persulfates	1.5 x 10 ⁻³ lb./hr.	0.00144 lb./hr	Highest pound per hour emission on December 9, 2019.
Total boric acids	0.03 lb./hr	0.0214 lb./hr	Highest pound per hour emission on February 18, 2020
PM _{2.5} TACs	0.03 lb./hr	0.02005 lb./hr	Highest pound per hour emission on March 21, 2020
PM ₁₀ TACs	0.12 lb./hr	0.00086 lb./hr	Highest pound per hour emission May 15, 2020

This emission unit also has several material limits. Table 2 (below) outlines the material limits and either the 12-month rolling observed value as of July 2020, or the highest throughput per 8-hour time period. Some materials are used in multiple locations at the facility and may have a combined limit with another emission unit.

Table 2: Material Limits for EUCORNERSCRUB

Material	Limit	Observed Value	Notes
Ethylenediamine tetra-acetic acid, tetrasodium salt	5,310,153 pounds ^A	714 pounds	
Aluminum Sulfate	7,671,975 pounds ^A	0 pounds	No aluminum sulfate was processed in the last 12-month time period
Total Nitrolotriacetic Acids	5,256 pounds ^A	1 pounds	
Disodium tetraborate	48,000 pounds ^{B,C}	2,153 pounds	Highest 8-hour usage on March 16, 2020
Disodium tetraborate	21,664 pounds ^{B,D}	2,153 pounds	No product was vented out SV-7 during this time frame
Total Boric Acids	24,000 pounds ^{B,C}	12,661 pounds	Highest 8-hour usage on February 18, 2020
Total Persulfates	8,007 pounds ^{B, C}	1,816 pounds	Highest 8-hour usage on December 9, 2019
Total Persulfates	2,400 pounds ^E	1,248 pounds	Highest 8-hour usage on November 13, 2019
Cobalt	1,601 pounds ^{B,C}	397 pounds	Highest 8-hour usage on May 16, 2020
Cobalt	1,367 pounds ^{B,F}	397 pounds	Highest 8-hour usage on May 16, 2020

^A Limit and observed value are based upon a 12-month rolling time period.

^B Limit and observed value are based upon an 8-hour time period.

^C This limit applies per 8-hour time period when exhausting only through SV-6, the scrubber associated with this emission unit.

^D This limit applies per 8-hour time period when exhausting through SV-6 (the scrubber associated with this emission unit) and SV-7 (the powder blending wet scrubber associated with FGWESTPOWDER)

^E This limit applies per 8-hour time period when exhausting through SV-6 (the scrubber associated with this emission unit) and SV-7 or SV-8 (the powder blending wet scrubber or the powder blending dust collector associated with FGWESTPOWDER)

^F This limit applies per 8-hour time period when exhausting through SV-6 (the scrubber associated with this emission unit) and SV-8 (the powder blending dust collector associated with FGWESTPOWDER)

Verification of the emission rates via stack testing, is not being requested at this time.

KD was able to see the display area for the scrubber, and observed the pH was 8.2 with a 288.9 conductivity, and a pressure drop of 0.2" WC, and noted that the unit was last calibrated in July of 2019. Ms. Albin supplied KD with the appropriate pressure drop readings for the scrubber. The pressure readings are taken every three (3) hour block, at least 1.5 hours apart. The MAP specifies that the scrubber should be operating at a pressure drop of 0.0 – 3.0" WC with a flow of greater than 5 gpm. Per the records, the scrubber operates at a flow rate around 8 gpm, and the pressure drop ranges from 0.12 – 0.22" WC. The scrubber most recently had preventative maintenance conducted on July 29, 2020 in which the belts, motor, packing and mist eliminators were inspected. The gauges were also inspected to ensure that they are reading correctly.

Certain products produced in this area are exhausted via the wet scrubber, while others are exhausted internally via a portable dust collector. The dust collector is similar to that of a shop-vac and was not in use at the time of the inspection. Haviland is appropriately tracking which products are exhausted to which control device.

The stack dimensions were not measured during this inspection but appeared to be of correct dimensions.

FGWESTPOWDER

This flexible group covers EUWESTPOTPERM, EUWESTPOW, and EUWESTCEMMIX, all located in the West

Building. EUWESTPOTPERM is a powder blending process that processes potassium permanganate containing compounds, consisting of a blender and filling line. The emissions from the blender and filling line are controlled by a wet scrubber. The emissions from the double planetary mixer associated with this process, also exhaust through an internally vented portable dust collector, depending on the materials that are being processed. EUWESTPOW is a powder blending process in a powder room that processes nickel containing compounds, consisting of two (2) blending tanks. The emissions from the blend tank and the paddle powder blend tank are controlled by the same wet scrubber for EUWESTPOTPERM or a dust collector, depending on the type of materials being processed. EUWESTCEMMIX is a powder blending processes in the manufacturing area that processes acidic and caustic containing compounds. The emissions are from this process are controlled by the wet scrubber for this area or an internally vented portable dust collector, depending on the materials being processed.

Several emission limits are applicable to this flexible group and are outlined in Table 3. As a result of the Fiscal Year 2018 Inspection, the Wet Scrubber associated with this flexible group was tested for PM emissions.

Table 3: Emission Limits for FGWESTPOWDER

Pollutant	Limit	Observed Value	Notes
PM	0.04 gr/dscf ^A	The January 25, 2019 Stack Test measured emissions of 5.40e ⁻³ gr/dscf	No additional stack testing is requested at this time.
PM, PM ₁₀ , and PM _{2.5}	1.7 lb./hr ^A	0.96 lb./Hr	The limit applies per pollutant, and the highest value was observed on July 9, 2019.
Total Subtilisins	2.92 x 10 ⁻⁴ lb./hr ^A	0.002917 lb./hr	Baseline Calculation
Total nitrolotriactic acids	1.04 x 10 ⁻¹ lb./hr ^A	1.04 x 10 ⁻¹ lb./hr	Baseline Calculation
Total persulfates	1.50 x 10 ⁻¹ lb./hr ^A	0.02 lb./hr	Highest hourly emission observed on August 1, 2019
PM	0.01 gr/dscf ^B	Verifiable through stack testing.	Stack testing not requested at this time.
PM, PM ₁₀ , and PM _{2.5}	0.27 lb./hr ^B	0.00123 lb./Hr	The limit applies per pollutant, and the highest value was observed on August 22, 2019
Nickel	7.1 x 10 ⁻⁴ lb./hr ^B	7.1 x 10 ⁻⁴ lb./hr	Baseline Calculation
Total Persulfates	3.33 x 10 ⁻³ lb./hr ^B	9.6 x 10 ⁻⁴ lb./hr	Highest hourly emission rate observed June 30, 2020
Total Silica	1.19 lb./hr ^A	0.3333 lb./hr	Baseline Calculation
Total Fluorides	0.501 lb./hr ^A	0.501 lb./hr	Baseline Calculation
Total Fluorides	3.33x10 ⁻³ lb./hr ^B	3.33x10 ⁻³ lb./hr	Baseline Calculation
Total Boric Acids	0.501 lb./hr ^A	0.09 lb./hr	Highest hourly emission rate observed on August 7, 2019
Total Boric Acids	3.33x10 ⁻³ lb./hr ^B	3.33x10 ⁻³ lb./hr	Baseline Calculation
PM 2.5 TACs	1.03 lb./hr ^A	0.65 lb./hr	Highest hourly emission rate observed on July 12, 2019
PM 2.5 TACs	1.81 x 10 ⁻² lb/hr ^B	0.004834	Baseline Calculation
PM10 TACs	1.7 lb./hr ^A	0.00225 lb./hr	Highest hourly emission rate observed on August 14, 2019
PM10 TACs	0.27 lb./hr ^B	0.27 lb./hr	Baseline Calculation

^A This limit applies for equipment exhausting through SV-7, the wet scrubber associated with this flexible group.

^B This limit applies for equipment exhausting through SV-8, the dust collector associated with this flexible group

Table 4 outlines the material limits that are applicable to this flexible group. Some materials may only exhaust through one (1) of the two (2) control devices associated with this flexible group, either the wet scrubber or the dust collector. Additionally, some materials are applicable when concurrently running with EUCORNERSCRUB.

Table 4: Material Limits for FGWESTPOWDER

Material	Limit	Observed Value	Notes
Ethylenediamine tetra-acetic acid, tetrasodium salt	973,528 pounds ^{A,C}	611 pounds	
Ammonium dihydrogen phosphate	3,162,340 pounds ^{A,C}	132,796 Pounds	
Sodium sulfite	885,455 pounds ^{A,C}	225,734 pounds	
Sodium ligno sulfonate	3,162,340 pounds ^{A,C}	1,661 pounds	
Sodium percarbonate	5,375,977 pounds ^{A,C}	44,603 pounds	
Oxirane, methyl-, polymer with oxirane, 8-methylnonylether	3,162,340 pounds ^{A,C}	1,142 pounds	
Benzenesulfonic acid, mono-C10-13-alkyl derivs., sodium salts	3,162,340 pounds ^{A,C}	0 pounds	Records indicate none of this compound has been produced.
Total nitroloacetic acids	858,480 pounds ^{A,C}	1,289 pounds	
Potassium iodide	3,301 pounds ^{B,C}	7 pounds	Highest 8-hr usage on September 16, 2019
Potassium permanganate	2,136 pounds ^{B,C}	2,130 pounds	Highest 8-hr usage on March 10, 2020
Potassium permanganate	49,914 pounds ^{B,E}	0 Pounds	Records indicate none of this compound was exhausted through the dust collector
Disodium tetraborate	33,006 pounds ^{B, C}	0 Pounds	Records indicate none of this compound has been produced.
Disodium tetraborate	24,076 pounds ^{B, D}	0 pounds	Records indicate none of this compound has been produced.
Ferrous Sulfate heptahydrate	33,006 pounds ^{B,C}	12 Pounds	Highest 8-hr usage on September 16, 2019
Total Boric Acids	33,006 pounds ^{B, C}	12,661 Pounds	Highest 8-hr usage on February 18, 2020
Total Boric Acids	23,113 pounds ^{B, D}	12,661 Pounds	Highest 8-hr usage on February 18, 2020
Total Persulfates	3,301 pounds ^{B, C}	1,324 Pounds	Highest 8-hr usage on November 7, 2019
Total Persulfates	2,316 pounds ^{B,D}	1,248 Pounds	Highest 8-hr usage on November 13, 2020
Total Persulfates	53,344 pounds ^{B,E}	2,854 Pounds	Highest 8-hr usage on January 7, 2020
Total Persulfates	51,317 pounds ^{B, F}	1,356 Pounds	Highest 8-hr usage on March 26, 2020
Cobalt	5,176 pounds ^{B,E}	317 Pounds	Highest 8-hr usage on July 27, 2020
Cobalt	2,145 pounds ^{B,F}	397 Pounds	Highest 8-hr usage on May 16, 2020
Alcohols, C12-16, ethoxylated	3,162,340 pounds ^{A,C}	0 Pounds	Records indicate none of this compound has been produced.
Dimethyl silicone polymer with silica	3,162,340 pounds ^{A,C}	0 Pounds	Records indicate none of this compound has been produced.

^A The limit is based upon a 12-month rolling time period

^B The limit is per 8-hour time period

^C This applies when exhausting through SV-7 only

^D This applies when exhausting through SV-6 (EUCORNERSCRUB Wet Scrubber) and SV-7 simultaneously

^E This applies when exhausting through SV-8 only

^F This applies when exhausting through SV-6 (EUCORNERSCRUB Wet Scrubber) and SV-8 simultaneously

The scrubber associated with this process was operating, but no production was occurring at the time of the inspection. Ms. Albin showed KD the pressure drop indicator and how Haviland is tracking the pressure drop. Records indicate the scrubber operates in the range specified in the MAP, and had a pressure drop of 2.6" WC at the time of the inspection. Haviland is properly tracking the pressure drop for the dust collector as well.

Roof-top observations were made on the West building, and the areas surrounding the scrubber and the dust collector were clean. Visible observations of the scrubber did not show any foaming or discoloration. The area surrounding the dust collector exhaust had been of historic concerns. Ms. Albin told KD that Haviland had been working hard to prevent any additional incidents that have occurred in the past.

Haviland is not allowed to exhaust any boric acid, potassium permanganate, or any persulfate compound simultaneously through the scrubber (SV-7) and the dust collector (SV-8). Records indicate they are not exhausting simultaneously. Haviland is not allowed to process any hydroquinone in the Pot Perm Powder blender of the Pot Perm filling line, and records show no hydroquinone was processed in this area. Haviland is properly keeping baseline calculations for all compounds processed through the scrubber and the dust collector.

FGFACILITY

This flexible group covers all process equipment source-wide including equipment covered by other permits, grand-fathered equipment, and exempt equipment. Haviland has properly labeled all equipment on site, as per PTI No. 71-17E.

The facility has an individual HAP limit of 8.9 tons per year (tpy) and an aggregate HAP limit of 22.4 tpy, both based upon 12-month rolling time periods. Records indicate aggregate HAP emissions of 2.12 tons, as of June 2019. Hydrogen Chloride had the highest individual emissions during the time period at 0.3 tons. VOC emissions are limited to 45 tpy, based upon a 12-month rolling time period. Records indicate that as of June 2019, the 12-month rolling VOC emissions were 2.3 tons. Haviland is adequately tracking VOC and HAP content, as well as emissions.

The facility is required to implement and maintain a Malfunction Abatement Plan (MAP) for all permitted equipment, for which they are following.

Miscellaneous Exempt Equipment

The remainder of compliance evaluation portion of this report is based on the building, area, or room it is located in. All of this equipment relies on Rule 201 permitting exemptions to demonstrate compliance.

East Campus

The east campus is the largest production site of the three (3) production areas. It is located at 421 Ann Street and contains several different areas which rely on Rule 201 permitting exemptions which will be described below.

The industrial packaging and repackaging area, or the acid room area, is controlled by a wet scrubber located on the roof. This same scrubber also controls some (not all) of the tanks from the North Tank farm. There are six (6) exhaust points that are all controlled by the common acid room scrubber; four (4) are caustic tanks and two (2) are battery acid tanks. The products made, diluted, mixed, and filled in this area include nitric acid, sulfuric acid, hydrochloric acid, phosphoric acid, sodium bisulfite, magnesium bisulfite, and various caustics. The control panel for this scrubber showed a pH of 2.7" WC. Ms. Albin indicated that Haviland is looking to replace this scrubber. Roof-top observations of the scrubber showed some debris inside the intake of the scrubber, and there appeared to have been some patching done and there were tarps covering the ductwork for this scrubber on the roof. KD asked Ms. Albin about the patchwork and tarps, and Ms. Albin indicated they had recently done some work on the ducts because they had noticed some wear, but the work was complete, and the tarps would be removed. Maintenance was last done on the scrubber on July 14, 2020. Rule 290 records are used for all of these processes; records are attached. Records indicate that the emissions for each of the contaminants, are

below what is allowed for use of this permitting exemption, based upon their screening levels.

The two (2) battery acid storage tanks are exempt from Rule 201 permitting under Rule 284(2)(h).

The Upper and Lower Manufacturing Areas are located near the Chrome blend area. These areas are primarily used for packaging, but there are some reactor vessels. All of the mixing tanks in this area exhaust to the common East Manufacturing scrubber. The tanks associated with both the upper and lower manufacturing areas of East Manufacturing also rely on the Rule 290 permitting. Records show that the emissions are below what is allowed based upon the screening levels for the compounds.

A small, four (4) tank, tank farm is located directly outside of the manufacturing area. These tanks hold acids such as Hydrochloric Acid, Sulfuric Acid, and Nitric Acid. These tanks use Rule 201 permitting exemption Rule 284(2)(k).

There are also some other tanks in the East building that rely on Rule 291 to be exempt from Rule 201 permitting. The uncontrolled Potential to Emit (PTE) calculations show that the potential for all air contaminants, including VOCs and contaminants with various screening levels are below the allowable PTE.

The Resin Room is a semi-self-contained room that does resin blending. This is controlled by a dust collection system with two (2) air-vey vacuum exhausters. The Resin room relies on Rule 290 to be exempt from Rule 201 permitting. Particulate emission calculations show that monthly PM emissions meet the Rule 290(2)(a)(iii)(A) permit exemption. KD viewed the area where the dust collection systems were housed and noticed particulate in and around the area. Ms. Albin showed KD that the collection hoppers were full and went on to state that since this area is only accessible when the chrome area is not in operation, these hoppers cannot be emptied until the production of the chrome is complete and it is safe to re-enter that area. KD requested that this area be cleaned up as soon as possible, since there was no chrome production occurring at the time of the inspection.

A larger North Tank Farm is located on the north end of the facility and feeds the contents of the tanks back to the acid room, which is subsequently controlled by the acid room scrubber, however, not all of the tanks are controlled by the scrubber. The seven (7) tanks contain various acids, such as sulfuric acid and nitric acid, and are either filled via truck or rail. The tanks exhausting to ambient air are exempt from Rule 201 permitting under Rule 284(2)(h). The tanks that exhaust to the scrubber utilize Rule 290 to be exempt from Rule 201 permitting and are associated with the Rule 290 records that were mentioned above for the Acid Room.

There is also one (1) 500,000 BTU/Hr natural gas boiler in this building as well. This is exempt from Rule 201 permitting under Rule 282(2)(b)(i). One (1) 20 kw (68,242 BTU/Hr) natural gas emergency generator housed here as well. This is exempt from Rule 201 under Rule 285(2)(g).

Corner Building

Aside from the permitted process in the corner building, there is a bromine tablet line that is exhausted to an externally vented dust collector. Rule 290 is used to be exempt from Rule 201 permitting. This unit was not in operation at the time of the inspection. Records indicate it meets the PM limit established in Rule 290(2)(a)(iii)(A) permit exemption, with maximum monthly emissions of 6.44 pound per month.

Laboratory Building

The Laboratory building is used for bench type lab work. The lab benches all have hoods and are externally exhausted. This is exempt from Rule 201 permitting under Rule 283(2)(b). Within this building, there is also a small pilot plating line. The line consists of several bucket sized tanks. This also is exhausted externally. This process utilizes T-BACT, and is exempt from Rule 201 permitting under Rule 283(2)(a). Haviland had previously contacted the AQD about expanding this line and making it much larger, but Mr. Gaeth, indicated they were not pursuing this further, at this time.

West Building

The west building is located at 521 Ann Street, Grand Rapids Michigan. This building is directly to the west of the main East campus. Aside from EUWESTPOTPERM and EUWESTPOW, which are permitted and have already been described above, the rest of the equipment in this building relies on Rule 201 permitting exemptions.

A majority of the building houses a large liquid processing and packaging area, and the large tanks are exhausted through a wet scrubber; tank #11, however, has its own scrubber. The tanks that use the main scrubber, which is located on the roof-top, and tank 11 rely on Rule 290 to be exempt from Rule 201 permitting. KD observed the scrubber from the rooftop and the scrubber appeared to have proper flow and there was no evidence of foaming or discoloration.

There is also one small dust collector in the packaging area, which is exhausted to the in-plant environment. This is exempt from Rule 201 permitting under Rule 284(2)(k).

Also located in this building is a separate powder mixing and packaging area with an externally vented baghouse used to control particulate. This line was not in operation at the time of the inspection. This emission unit utilizes Rule 290 (a)(iii)(A) to be exempt from Rule 201 permitting.

North Building

For the inspection of the North Building, additional staff joined, including Mr. Brian Schoen, Director of Consumer Products. The north building is located at 2168 Avastar Parkway, Walker Michigan. This building is located to the north and west of the main campus. No equipment in this building is permitted, but rather relies solely on permitting exemptions. Mr. Gaeth did say that they have recently acquired more of the building and have plans to expand into that area in the future. However, at the time of the inspection the newly acquired portion of the building did not have any Haviland equipment or personnel

In the main area of the building, Haviland has three (3) major powder filling lines for which Haviland uses Rule 291 to be exempt from Rule 201 permitting. Haviland maintains PTE calculations, as required by Rule 291, showing the uncontrolled PTE for the lines for all air contaminants are below the maximum allowed. The PTE for VOC is the highest at 0.02 tons. There is a wet scrubber associated with those lines. At the time of the inspection, the scrubber was running with a pressure drop of 0.6 inches WC. Haviland tracks operational parameters for this unit to ensure proper operation. Records indicate the scrubber has been operating at a pH between 6 and 11. The records also indicate when the pH or conductivity that has been either high or low, and action has been taken to correct the issues including full discharges of the scrubber. According to records, the most recent preventative maintenance was done on June 15, 2020. The unit was checked for leaks, the mist spray area was cleaned out and an inspection of the instruments was conducted. Roof-top observations were made around the discharge area of the scrubber, and no issues were noted.

Also located in the main area of the north building are six (6) large mixing, blending, and storage tanks. All of the tanks were labeled with what they were holding. All six (6) tanks are vented through a common duct which is externally exhausted without any controls. There are also some bulk storage tanks. Per Ms. Albin, Haviland relies on the Rule 201 permit exemption, Rule 291 for these tanks. Rule 291 allows for a PTE of 5 tons for VOC per year, and the uncontrolled PTE for VOC emissions from these tanks is 0.04 tons and 0.48 tons.

In another room just through the main area, there is a powder storage tank used for storage and blending that has an associated externally vented baghouse to control particulate emissions. This process utilizes Rule 290 to be exempt from Rule 201 permitting. Records indicate that the highest emissions in a month were 0.07 lbs/month. Haviland had a minor event in December 2019 where there was a small breakthrough event. Haviland provided the uncontrolled emissions data (for the entire month) to demonstrate that even with this breakthrough event, emissions would be below the uncontrolled emissions limit.

Ms. Albin noted that the equipment that was formerly held in the Swagelok area of the East Campus had been moved here. This area is now called the contract manufacturing line and consists of a liquid filling line that is internally vented with no controls and is exempt from Rule 201 permitting under Rule 291.

In the area next to the contract manufacturing line is the area that will be used for producing pool tablets. This area, while not entirely complete, will have tablet presses, and associated cartridge filter dust collectors. KD and WO discussed potential issues that can occur with this type of manufacturing. Haviland staff ensured EGLE staff that appropriate precautions were being taken, including a dry, negative pressure room, with any floor sweepings being handled via a dilution and neutralization process. KD asked about the disposal of the cartridges associated with the dust collection system, and Haviland indicated they are still working through those types of details. KD also asked if Haviland would be developing a Malfunction Abatement Plan and any sort of operations and housekeeping type of plan for this area. Mr. Schoen indicated that they were planning on do so, but it was not yet complete. KD requested that copies of these be supplied to EGLE when they are completed. As part of the initial scope of this project, Ms. Albin had supplied AQD with appropriate Rule 290 calculations

indicating they could meet this exemption, given the constituents of the product.

In another room leading back towards the main area of the building there is a silk-screening process that exhausts externally through two (2) vents. This process was in operation at the time of the inspection, KD observed bottles being screen printed. The silk-screening process is exempt from Rule 201 permitting under Rule 287(2)(e).

Miscellaneous

There is a total of eight (8) natural gas boilers located throughout the numerous buildings. The largest boiler is 500,000 BTU/Hr. These boilers are exempt under Rule 282(2)(b)(i). Haviland also has two (2) natural gas emergency generators; one (1) is located outside of the West building and one (1) is located outside of the east building. The largest one is 60 kW (204,728 BTU/Hr). These generators are exempt from Rule 201 permitting under Rule 285(2)(g). Due to age, they do not appear to be subject to the provisions of the new source performances standards (NSPS) 40 CFR Part 60 Subpart JJJJ for stationary spark ignition internal combustion engines. These generators may, however, be subject to the provisions of 40 CFR Part 63 Subpart ZZZZ for stationary reciprocating internal combustion engines. Since Haviland is an area source of HAP's, the AQD does not have delegation of this regulation. Hour records indicate the run for less than 50 hours per calendar year. The most recent preventative maintenance was conducted in April 2020.

Currently, there are no parts cleaners located on site.

Compliance Determination

Based on the observations made during the inspection and a subsequent review of the records, it appears that Haviland is in compliance with PTI No. 71-17E and Consent Order AQD-2018-01. The AQD will follow up with Haviland to ensure compliance with any additional Federal Regulations, pending the supplied applicability determination.

NAME Kaitlyn DeVries DATE 9/8/2020 SUPERVISOR HH