DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

P103649177

FACILITY: BPV Environmental LLC		**SRN / ID:** P1036
LOCATION: 511 76th Street SW, BYRON CENTER		**DISTRICT:** Grand Rapids
CITY: BYRON CENTER		**COUNTY:** KENT
CONTACT: Jacob Draaism , Plant Manager		**ACTIVITY DATE:** 06/17/2019
STAFF: Chris Robinson	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** Minor
SUBJECT: FY '19 on-site inspection		
RESOLVED COMPLAINTS:		

AQD staff Chris Robinson (CR) was initially onsite to address AQD staff concerns for observed smoke emanating from the side of an unknown building. CR arrived at the location at approximately 16:30. Several roof stacks were observed, one of which had visible emissions (white) of approximately 0-10%. During the inspection CR determined that the opacity was from the Line 1 stack and that it consisted of mostly steam. The building is sectioned off into several different businesses, but the stacks belong to BPV Environmental. CR spoke with Mr. Jacob Draaisma, Plant Manager who provided pertinent information and a tour. CR discussed intent of the visit and provided identification. This was an unannounced self-initiated Inspection. No odors were observed.

Facility Description/ Compliance Evaluation

BPV Environmental operates a community-wide paper recycling program known as the "PaperGator". Paper collected from this program is recycled into lawn, garden and Pet Care products such as lawn repair kits and animal bedding. All of the paper is preprocessed in the same manner and then transferred, via ducting, to one (1) of three (3) manufacturing lines. A site layout was provided and is attached.

Preprocessing consists of the following. Paper is unloaded and staged inside the building where it is transferred by loader to a Bale Buster for breaking up or loosening the bundles. The loosened paper is then conveyed to a sorting area where metal items are removed by magnets and the paper is manually separated by staff. Once sorted, the paper is transferred to a pre-shredder and then to the Bliss shredder. The material is then ducted to the Main Tank for storage. Throughout all of the processes, paper transferred via ducting utilizes cyclones. All of the cyclones are vented to one of eight (8) baghouses which are either vented externally through the side of the building or to the in-plant environment. Each baghouse is equipped with a magnehelic gauge. The following readings were collected.

Baghouse	Reading ("w.c.)	Operating Range ("w.c.)	CFM	Vents Externally or Internally
BH 1	5.6	1.8 – 4.5	8,000	Internally
BH 2	0	1.5 – 4.3	5,000	Externally
BH 3	3	1.3 – 4.2	5,000	Externally
BH 407	offline	?	5,000	Internally
BH 408	2	?	5,000	Externally
BH 409	4.4	?	5,000	Internally
DH1	offline	?	4,000	Internally
DH2	offline	?	3,000	Internally & Externally

Mr. Draaisma informed CR that Baghouse BH 407 was offline due to mechanical issues. Even though some of the baghouses are vented internally, they are all equipped with safety doors that open when the unit malfunctions to prevent further issues. Once opened the baghouses vent externally (See Pictures Below). This is the most likely source of the emissions observed by AQD staff. The dust observed in the picture below is caused from staff cleaning the unit. CR discussed the magnehelic readings for baghouses BH1 and BH2. Baghouse BH2 had a reading of zero, which is lower than the operating range indicated on the gauge, while Baghouse BH1 was higher than the indicated operating range. Assuming that the gauges are working correctly,

a low, but not zero, reading indicates that either the bag filters were just cleaned or leaking. High pressure indicates that the system is potentially plugged. This was discussed and corrective action was immediately taken. Per follow-up call on 6/20/2019 staff determined and unplugged the tubing for the baghouse BH2 magnehelic guage. In addition, the facility's air compressor was offline due to mechanical issues. A temporary smaller air compressor was installed that is not as effective at pulsing the baghouse filters, therefore maintenance is more frequent. A new air compressor has been ordered. The operating range was not provided on the magnehelic gauges for baghouses BH408 and BH409. However, these two baghouses are similar to the remaining three, therefore it's being assumed that baghouse BH409 is operating on the high side and will also need attention soon.

Paper stored in the Main Tank is distributed as needed to one (1) of three (3) manufacturing lines which all function in a similar manner. Water is added to the paper to allow it to be molded or pelletized. Once completed water is driven off by use of one of three natural gas fired driers. The final product is packaged and then stored in the warehouse until shipped. All three driers draw fresh air in and exhaust via separate vertical stacks through the roof. The Line one (1) and Line three driers are rated at 3,000,000 Btus and the Line 4 drier is rated at 4,000,000 Btus.

CR discussed Rule 201 and informed Mr. Draaisma that all equipment that has the Potential to Emit an air contaminant MUST be covered under a Permit To Install (PTI) or exempt from permiting requiremsnts. A copy of the PTI exemption handbook was provided and discussed. The facility currently does not have any active or voided Permits nor was Mr. Draaisma aware of any exemptions being used but did ask that the AQD speak with Mr. Jody Black when he returns. CR spoke with Mr. Jody Black on 6/20/2019, the facility is operating the equipment under Rule 201 Permitting exemptions Rule 285(2)(l)(vi)(B) for equipment that has emissions that are released to the in-plant environment, Rule 285(2)(l)(vi)(C) for equipment that has externally vented emissions controlled by a fabric filter and 282(2)(b)(i) for the driers.

The site layout indicates that the baghouses are rated for 3,000 – 8,000 CFM for a total of 40,000 CFM. Based on a Rule 331 emissions factor of 0.1 pounds Particulate Matter (PM) per pound of exhaust gas, the potential PM emissions would be approximately 84 tons per year (tpy), which is less than the title V threshold of 100tpy (Combined PM10 & PM2.5). Therefore, the source does not appear to currently be subject to Title V. However, the facility plans on adding a new manufacturing line with two (2) additional baghouses. BH 501 would be 8,000 CFM and BH 502 would be 5,000 CFM. With the additional baghouses, the facility's Potential to Emit of total PM would most likely exceed 100tpy. The facility would then be required to comply with Title V requirements or apply for an opt-out PTI for PM. CR discussed this with Mr. Draaisma.

(40,000 CFM x 0.08 lbs per CF of Air) = 3,200 lbs/min
(3,200 lbs per min x 60 minutes per hour) x 8760 hours per year = 1,681,920,000 lbs per year
1,681,920,000 lbs per year / 1,000 lbs exhaust gas = 1,681,920 x 0.1 = 168,192 lbs / 2000 lbs per ton = **84 tpy**

Conclusion

Based on observations and discussions, BPV Environmental appears to be in compliance with applicable air quality rules and regulations. The facility intends on adding an additional manufacturing line in the near future. A follow-up visit is recommended.

Image 1(BPV Envronmental) : Staging Area

Image 2(BPV Enviromental) : Pre-Processing Area

Image 3(BPV Environmental) : Pre-Processing Area - Dust from cleaning of BH 407

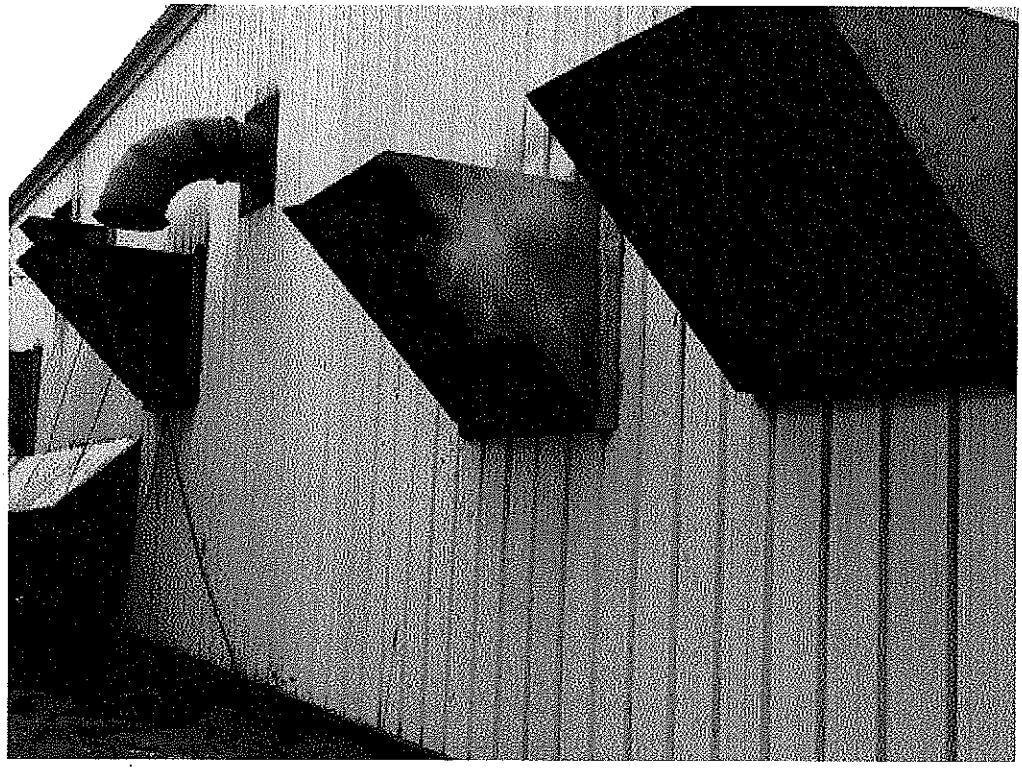

Image 4(BPV Environmental) : Baghouse exhaust points - Dust is from the cleaning of BH 407.

NAME _____ DATE 7/31/2019 SUPERVISOR _____