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

B167843905

FACILITY: GRAPHIC PACKAGING INTERNATIONAL LLC		**SRN / ID:** B1678
LOCATION: 1500 N. PITCHER ST., KALAMAZOO		**DISTRICT:** Kalamazoo
CITY: KALAMAZOO		**COUNTY:** KALAMAZOO
CONTACT: Donald Krug , EHS Manager - Mill		**ACTIVITY DATE:** 04/02/2018
STAFF: Monica Brothers	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Unannounced scheduled inspection		
RESOLVED COMPLAINTS:		

Staff, Monica Brothers, arrived at the facility at about 9:45am. Because this facility has had many odor complaints and confirmed Rule 901 violations in the past, I decided to assess odors in the area first before going inside the plant. Winds were out of the south at about 5 mph at that time. I first drove up to Borgess Brain and Spine Institute because most of the recent complaints have been from this location. As I pulled into the parking lot, no odors were detected. I walked around the parking lot for about ten minutes without detecting odors. I then drove west into Riverside Cemetery. As I got further west, I could begin to detect light papermill odors. I could also detect light odors from Graphic Packaging's clarifier. However, the winds were not in the most favorable direction for detecting strong odors in this area. The odors were not strong or persistent enough to warrant a violation of Rule 901 at that time. I then went to Graphic Packaging to conduct the inspection.

I arrived at the facility at about 10:15am and met with Don Krug, the EHS Manager for the Mill. We decided to do records first, so he took me to his office, and I asked him a few introductory questions about the mill. Graphic Packaging is a paper mill that makes a few thicknesses of cardboard for things like cereal boxes and tissue boxes. The facility is located in a populated area in downtown Kalamazoo, and this plays a major role in why there have been many odor complaints and violations in the recent past. Don said that they have about 350 employees at the mill, and that they operate 24/7 with both boilers and both paper machines. Graphic Packaging began operations at this location in 2000, although this facility was active as a papermill before bought by GPI. They are currently operating under MI-ROP-B1678-2015. There are two sections to this ROP, the Mill Section, and the Carton Plant Section. Records for both sections were seen on 4/2/18, and I also toured the Carton Plant that day. However, due to GPI scheduling issues, I came back on 4/3/18 to tour the Mill Section of the plant with Gregg Lanternier, the Engineering Manager for the Mill.

Source-Wide Conditions: **This covers the emissions for both the mill and carton plant combined. They have a limit of 9.9 TPY (12 month rolling) for individual HAPs, and 24.9 TPY (12 month rolling) for combined HAPs. This includes the emissions for the boilers and clean-up solvents. Their records show that they are consistently under these limits. Individual HAPs records for January and February 2018 were 4.37 TPY and 4.39 TPY, respectively. Combined HAPs records were 9.5 TPY for January and 9.5 TPY for February as well.**

Section 1: Mill

EUBOILER#7: Boiler 7 is a natural gas-only boiler with a heat input of 127 MMBTU/hr. Don said that he believes that this boiler was installed sometime in the 1950s. Their ROP requires them to monitor and record their natural gas consumption rate for this boiler, for each calendar month. Don showed me that they are keeping these records. Boiler 7 was not operating at the time of the inspection.

EUBOILER#8: This boiler is capable of firing both natural gas and No. 6 fuel oil, however, they have not used fuel oil in Boiler 8 or Boiler 9 since 2009. This boiler has a max heat input of 240 MMBTU/hr and has a CEMS that records NOx during the ozone season. They also have an 85,000 gallon oil storage tank outside. Don showed me that they were keeping track of the hours of operation and natural gas consumption rates per day and per calendar month. For February, the CEMS data showed a natural gas usage of 113891.9 kscf. Don also calculates the average daily heat input at the end of each calendar month, which was 191.8 MMBTU/hr for February 2018. During the facility tour, Boiler 8 was running at about 113 klbs steam/hr, and the CEMS was reading 26.54 lbs/hr and 103.4 ppm for NOx.

EUBOILER#9: This boiler is capable of firing both natural gas and fuel oil, and has a maximum heat input of 227 MMBTU/hr. It has low NOx burners and flue gas recirculation. As required by their ROP, they are keeping track of hours of operation and the natural gas consumption rate for each calendar day and

minus water, as applied limit. The Sun Hydro Foil: 124C Tan, for example, was only 2.03 lbs/gal. They are keeping track of the VOC and HAP contents for all coatings, inks, and reducers for this emission unit.

EU01GASTANK: Because this unit is considered an existing stationary gasoline dispensing facility at an area source of HAPs, it has a gasoline throughput limit of less than 10,000 gallons. Don showed me throughput records for the unit, which were only 1,812 gallons for all of 2017.

FGRULE290: This flexible group covers their ethylacetate emissions from EUCONVERTETHYLACETATE, and their PM emissions from EUMILLCYCLONES. They use the ethylacetate on a rag to wipe the excess wax off of the rolls. They purchase the ethylacetate in 55-gallon drums, and simply assume that they use one drum each month. This is a very conservative estimate and still keeps them under the 1000 lb/month limit. January 2017 was the last time they purchased two drums. Their PM emissions from their cyclones show that they are under the 500 lbs/month limit. They emitted 17.51 lbs PM in November 2017.

FGCOLDCLEANERS: They have one Safety Kleen unit in the stock-prep area that was installed in 1992. It is 6 ft^2 and is not heated or agitated. The solvent is 6.65 lbs/gal VOC. During the tour, the instructions were posted and the lid was closed.

FG-RICE-MACT4Z: This is an existing fire pump with an hour meter. They are limited to 100 hours of operation per calendar year, with 50 of those hours allowed for non-emergencies and testing. Their records show that they are under these limits. Don said that the only time this pump has operated is for testing purposes. During the tour, the hour meter read 741.64 hours. Don said that they inspect the unit every six months, every October and April. This is when they perform preventative maintenance, such as oil and filter changes, and inspections of hoses, belts, air cleaner, etc.

MISC: During the facility tour, I asked Gregg if we could go take a look at their clarifier, which is part of their water treatment process. This has been the biggest source of recent odor complaints. Upon arrival at the clarifier, I could smell some odors from the unit, however, it was fairly mild compared to other times when complaints have been called-in in the past. They were not de-watering sludge or operating their rotating vacuum drum at that time, which has also been a source of strong odors in the past. I asked Gregg what kind of chemical they use to deodorize the clarifier, and he showed me a tote of Redoxx 60, which, he said was very expensive. Gregg said that they usually only run the rotating vacuum drum when they have an excess of clay in the water, and that the clarifier itself gets drained and cleaned annually.

Section 2: Carton Plant

After leaving the mill, I drove across the street to the carton plant and met with Spencer Macko, who is the EHS Manager for that portion of GPI. We looked at records first and then took a tour of the facility. They print a variety of cardboard products like tissue boxes, cereal boxes, and cake mix boxes. They were making Special K Pumpkin Spice Crunch boxes during the inspection tour. Spencer said that they go through about 300 rolls of paper produced by the mill per day, and that a single press can go through an entire roll in only 20 minutes.

FGWEBPRESSES: There are six heat-set web-fed lithographic printing presses with in-line single roller coaters and video jet printers. The inks are cured with ultraviolet light and they are washed manually with a solvent. During the tour, the solvents and inks were kept in closed containers when not in use. The used rags with solvent also get placed into a closed container. Press 6 is different than the other five presses. It is a Kamori unit that is designed to print a bit higher quality than the other presses, but while still using the same inks. Scrap pieces of trimmed paper are conveyed by ducts to balers and then sent back to the mill for reuse. They have a dust collector for this process that is vented internally and can be considered exempt under Rule 285(l)(vi)(B).

Their records show that they are keeping track of their usage rate and type of each VOC-containing material for each calendar month. The VOC content for each material is recorded and they are all under the ROP limits. The fountain solution itself has a limit of 5.0% by weight as applied. Spencer showed me that the fountain solution is shipped in a concentrated formulation with about 14.8% VOC by weight. However, they mix 5oz of this fountain solution per gallon of water, which reduces the VOC content, as applied, to below the 5.0% VOC limit. All of the inks have a non-volatile fraction of more than 60% by weight. They are keeping monthly and 12-month rolling records of their VOC emissions. They have combined limit for Presses 1,2, and 3 of 41.8 TPY 12MR, a combined limit of 26.0 TPY 12MR for Presses 4 and 5, and a limit of 13.5 TPY 12MR for Press 6. Their records show that they are under these limits. In

February 2018, Presses 1,2, and 3 emitted 14.06 TPY 12MR, Presses 4 and 5 emitted 9.15 TPY 12MR, and Press 6 emitted 2.4 TPY 12MR.

FGRULE290: This flexible group encompasses Rule 290 emissions for all seven gluers and EUCARTON290ETHAC, which is their ethylacetate usage. They are limited to 1000 lbs/month for each material. Spencer showed me the record for IPA, acetone, and ethylacetate usage and associated VOC emissions. IPA was 19.6 lbs for October 2017, Acetone was 32.4 lbs for both February and March 2017, and ethylacetate was 43.01 lbs for February 2018. Records showed that they were consistently far under the 1000 lb/month limit. Spencer said that the glue they use contains no VOC.

FGCOLDCLEANERS: There are five cold cleaners at the carton plant. They were all installed either in 1992 or 2007 and are all under 10ft^2 and not heated or agitated. They use either Hickory Ink Wash (5.44 lbs/gal VOC), or Zone Defense (6.66 lbs/gal VOC). The facility maintains the units themselves and stores the two solvents in solvent cabinets. The spent material gets hauled away by Univar. During the tour, the lids were closed when not in use. Some of the units did not have rules posted, so I gave Spencer some of the DEQ stickers to put on all of the units lacking instructions.

The facility seemed to be in compliance at the time of inspection.

NAME Marin Brett DATE 4/24/18 SUPERVISOR MA 4/25/2018