

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

B167825118

FACILITY: GRAPHIC PACKAGING INTERNATIONAL, INC.	SRN / ID: B1678
LOCATION: 1500 N. PITCHER ST., KALAMAZOO	DISTRICT: Kalamazoo
CITY: KALAMAZOO	COUNTY: KALAMAZOO
CONTACT: Donald Krug , EHS Manager - Mill	ACTIVITY DATE: 05/08/2014
STAFF: Dorothy Bohn	COMPLIANCE STATUS: Compliance
SUBJECT: A scheduled, unannounced inspection completed on 5/8 & 9.	SOURCE CLASS: MAJOR
RESOLVED COMPLAINTS:	

Day 1 - 5/8/14

Prior to entering the source, Mary Douglas and I drove on 3 sides of it and did not observe any visible emissions or detect any odors. Winds appeared to be out of the S-SE though so we could not really get downwind of the plant. We signed in at security at about 9:25. At about 9:40 Don Krug, EHS at the mill (section 1 of the ROP), came and we had a brief opening meeting. I gave him a copy of the inspection brochure but later gave it to Spencer Macko, the new EHS at the carton plant (section 2 of the ROP). We then went on a tour of the mill. A hard hat or bump hat, safety shoes, and hearing protection are required at the mill. At the carton plant, bandaids, jewelry and watches are not allowed (except a wedding band without any stones can be worn). Safety glasses, shoes, hearing protection and a hat or hair net are required.

Sourcewide: The PIVs (forklifts) are all powered by propane and space heating is primarily nat. gas space heaters.

Section 1

We began at the powerhouse. EUBoiler#8 & 9 were operating; EUBoiler#7 was not. The data displaying in the CEMS room showed for boiler #8: 74.25 ppm for raw and 71.36 ppm for corrected NOx and 6.56% O2. Boiler #9 was: 23.40 ppm for raw and 18.2 ppm for corrected NOx and 2.92% O2. In the computer room the DAS for Boiler 8 read: 0.115 #/MMBtu, 74 ppm & 17.13 pph for NOx, 6.5% for O2 and 150 kscfh gas flow. The DAS for Boiler 9 read: 0.029 #/MMBtu, 23.6 ppm & 4.2 pph for NOx, 2.9% for O2 and 142 kscfh gas flow.

I asked Don about EUBoiler#8 and if it had always been rated at 240 MMBtu/hr because most boilers are not required to keep records showing that they are under their max. rating. He said it was before his time but he thought it went back to why the boiler was required to have a CEMS and be subject to CAIR. EPA had determined that they had at one time operated at over 250 MMBtus/hr and that "once in always in" applied. I plan to look into this as part of the ROP renewal.

I also brought up the Boiler MACT with regards to their ROP renewal. Since they are a minor source of HAP, the area source MACT applies and the AQD doesn't have delegation for that. They will need to submit a table with their MACT requirements for us to add to the ROP. Don has notified EPA for the MACT but not us. They are proceeding as gas only with boiler 8 but with the capability of burning oil in the future. If they burn oil they will have to redeclare/notify EPA of the change in status.

EUK3Machine was operating. The starch prep/mix equipment vents outside and is not controlled. Don stated that they periodically have to go on the roof and clean it. The unit is permitted as uncontrolled. As we returned to the visitor entrance I asked Don where the company's met station was and he pointed it out on the roof over the visitor entrance area.

Next we went to plant 6 (stock prep) located on the east side of the railroad tracks. I had not been to this plant before. Waste paper, their raw material, is delivered and stored here.. Finished product is also stored here sometimes. Don said that there are no chemicals used here (except sometimes biocide). They clean and screen the paper waste before it is delivered to one of the 4 hydropulpers. Each hydropulper is used for a different paper mix. The pulp is then stored in a vat/tank until it is pumped to either the K1 or K3 papermachine. Don said the residence/storage time is short.

Then we went to see EUK1Machine. This was also operating. We saw Gary Foster, Engineering Mgr, here and he showed us the new bar coater. This replaced the air knife (which is still there but not used). The air knife has

a separator on the side of the unit that looks like a scrubber. The starch prep/mix is controlled by a wet scrubber but it does not have a pressure drop monitor or water flow meter. Don said whenever K3 is down, maintenance checks out the scrubber.

There are 3 coldcleaners in the mill. 1 is in the powerhouse maintenance area. It was post but the lid was propped open with no one around. Don put the lid down and said he would be speaking to the employees about it. There was one at plant 6. It was posted and the lid was closed. There was another one in the area of K3 but it may be gone now. We did not observe it.

At about 11:50 we left for lunch, returning about 12:55. We then went to EUConvertDept – the last part of the mill. This department makes pretty much all of the bacon wrap used in the U.S. There is an extruder that operates under Rule 286(a). It extrudes a thin layer of plastic (polyethylene) onto the paperboard and trims the ends/sides. The waste and dust from the trimmers is collected and compacted by one of 2 balers. Each baler is controlled by a cyclone that vents outside and is operated under Rule 290. This is included in their MAERs but not in the ROP so it needs to be added. The part of this department in the ROP is the coater/waxer with gas dryer. This line applies a layer of wax on the bacon board and prints on it. The only VOC is the ink.

EUMill290ETHAC is in the ROP as a Rule 290 source. Don said this is ethylacetate used to clean wax off the coater/waxer in EUConvertDept. This maybe needs to be considered emissions from coater/waxer rather than a separate emission unit. I want to look at this for the ROP renewal.

Section 2

At 1:30 we signed into the Carton plant with Spencer Macko. I gave him the inspection brochure but he was familiar with the inspection process from previous employment. We met Scott Headley, the plant manager and responsible official for this section of the ROP.

We viewed EUWebPress1 which was operating. They use Hickory wash to clean ink off tools and the printing surface. The wash comes in 55 gallon drums but is kept on each line in 1 gallon cans that are closed. There are small trays for cleaning and rags. The used rags are thrown down a chute into an open drum. The company assumes a 50% retention factor in their emission calculations because the container is supposed to be kept covered. The open container violates conditions III.2, 3 and 4.g of EUWebPress#6 and FGWebPresses2 and increases their actual emissions. We first observed this on press1 which does not have the requirement, but Spence (and later Scott) said the operation is the same on all of the lines. Also for emission purposes they combine the hickory wash use and claim the retention factor plantwide. We went out and viewed the operation on press 6 and the rag container was a drum (but no chute) and it was open. I informed them that this was a deviation/violation. The MSDS for the wash says it contains no HAP and is 68% VOC, 5.44 #VOC/gal with a specific gravity of 0.9591. The inks are mostly from Sun Chem.

We viewed the gluers. There are 7 and they operate under Rule 290 in the ROP. Their main adhesive is 4002B-Blue made by Coatings & Adhesive Corp. There are 3 coldcleaners in the carton plant. 1 is in maintenance. The lid was closed and posted. Then 2 are in the cassette room. The larger one is a #2Graymill unit. It was closed and posted, as was the small Justrite unit (this was labeled flammable). Spence said all contained the same cleaners, Selig Zone Defense by Zep. It is >90% petroleum distillate and < 10% citrus, 85%VOC or 5.61 #VOC/gal.

Balers: There are 3 of these at the carton plant. These vent to a baghouse that vent inside the plant. So these are exempt.

There is a plate room and I was told that the chemicals used here are accounted for under the webpresses. In the ROP there is EUCarton290ETHAC. Spencer said that this is used in their ink room where they have a small press to test/simulate printing. The ethylacetate is used to clean this. It is operated as exempt per Rule 290.

We left at 3:35 after a short closing meeting with Scott and Spencer where we discussed the open containers of used rags. We planned for me to return the next morning about 9 am to review the facility records.

Day 2 - 5/9/14

I arrived at 9:05 and met with Don Krug and Spencer Macko to review the facility records. We discussed possibly having a conference call with their consultant to discuss the ROP renewal if there was time. Their renewal application is due by 9/30/14. As it ended up we did not have the call but Spencer, Don and I discussed the following (some of it was discussed on 5/8 also):

1. I want to look at the 240 MMBtu/hr issue with EUBoiler#8 for my own curiosity.
2. They need to provide the applicable requirements for the Boiler MACT in the application.
3. Any equipment operating under Rule 290 that is not in the ROP needs to be added to it.
4. I want to look at whether or not EUMill290Ethac should be added to the coater/waxer in EUConvertDept. Neither EUMill290Ethac or EUCarton190ETHac are in the ROP and need to be added.
5. I want to look at the coater/waxer. It is in the ROP with just a Part 6 requirement and doesn't indicate whether it was permitted or operating under an exemption. So is it grandfathered or what?
6. The company wondered if all the presses could have the same requirements (since they were permitted at different times they currently do not). I said that they would need to submit a PTI application for that and do so ASAP if they want to do this.
7. I told them that we may need to add some monitoring/recordkeeping requirements. For instance they have a NMOC pph limit on EUBoiler#9 but no recordkeeping limit for it. (They are calculating it anyway.)

Then we reviewed the records going in order through the ROP. All records were complete through March.

Sourcewide Table: This is for facilitywide HAPs emissions limits to be a minor source. At the end of 3/2014 the total HAPs were 8.85 tons (12 month rolling total – MRT) and the single maximum HAP was 2.31 tons 12MRT (glycol ethers). They are not including HAP from their burning of natural gas though. They said they were told they only have to include HAP from fuel fired equipment when they burn oil. Back at the office I looked through the file and did not see this anywhere. I did a quick calculation based on HAPs estimates in MAERs and for 2013 the HAPs from the 3 boilers was about 2.1 tons. This is about ¼ of the HAPs total at the end of March. I discussed this with Mary and they need to add the boiler emissions. They appear to still be well below the limits so I will not cite them for this but they should still list it as a deviation in their certification.

Section 1

Powerhouse: Each boiler has its own gas meter. Don receives a monthly report on the daily hours of operation and gas burned in each one. He can also tell when a boiler was down by looking at the CEMs report. EUBoiler#7 has not operated since April 2013 (unless it operated after March). It is a standby boiler used when one of the others is down for maintenance or inspection. He had the fuel use records.

EUBoiler#8: They have not burned any oil since pre-2012. The max daily heat input in March was 167.4. Usually it was 145-160. Since the winter was so cold, I looked at January 2014 and the max daily heat input that month was 166.4. Don showed me documents for the CAIR NOx budget for the end of 2012 that their end balance was 103 credits and they had used 29 that year. He did not 2013's records available.

EUBoiler#9: No oil has been burned since the last inspection. Records for March show:

- The gas use was 98.2 MMcf (& they had daily records).
- The NOx pph was 3.5-4.0
- The 12 month rolling total (MRT) was 15.4 tons (the max was 18.4 in 4/13)
- The max pph NMOC in March was 1.16. This is a daily average.

Don said they have not had to calculate any of their NOx emissions from standby monitoring systems per VI.10.

PaperMachines: Don had all the required records. They began using Sterocoll 17.3%, a surfactant, in Jan. The coatings are each 0.013 #VOC/gal – water. Don only recalculates this if something changes. They have not used any materials with acrylonitrile yet. The land use in the surrounding area of the facility has not changed.

The 12 MRT VOC emissions for EUK1Machine was 4.67 tons in 3/14 and this was the max for the last 12 months. In March the total formaldehyde emissions were 1.3 pounds and the 12 month rolling total (MRT) emissions was 4.0#. Acrylamide just started being used at the end of January and the total emissions at the end of March were 3.6 #. (there is a typo in the just issued ROP modification for EUK1Machine condition VI.4. It says daily records and the PTI says monthly – which is what is necessary. So I will correct this at renewal.)

Products being used on EUK3Machine are BSP 2111 (felt wash), BSP 59LO (pitch inhibitor), 2510U (retention aid), BUS 1210 (biocide), Syn 160 (thickner) Polyco 3103 (latex) and BSP 2022 (cleaning). Max 12 MRT VOC emissions are 1.27 tons with very little variation. Daily max acetaldehyde emissions in March were 1.93#. The max 12 MRT formaldehyde emissions were in Feb. and March 2013 at 4.4#. At the end of March 2014 it was 1.7#. The coating on K3 is 0.001 #VOC/gal-water per Don's 5/14 email (attached).

EUConvertDept: Coating records show the highest VOC content is 2.23#/gallon minus water. (Don thought this was a coating used on a trial basis that is no longer used.) The next largest coating listed is 2.10 with 8.71 %

VOC by weight and a density of 8.08 #/gal. The highest use ink is WGY2886 WG B/B maple leaf yellow. No thinning is done. Almost all of the inks are from INX.

Rule 290: The 2 cyclones controlling the trimmers in this dept had monthly records showing max emissions of 17.26# in August 2013. EUMill290ETHAC records are based on when a 55 gallon drum of the solvent is checked out from the "store". The use is then being spread out equally over the months until another drum is checked out. A 55 gallon drum equals 413.8# VOC and is less than the allowed 1000#/month. It takes several months to use a drum so they are in compliance but I explained that Rule 290 does not allow the emissions to be averaged like that (it's like using purchase records). If they are going to use this to track emissions they have to assume that all the emissions happen in one month or else track them by sticking the drum at the end of each month to estimate the actual use.

Section 2

I observed a spreadsheet with all the material use. They then tie this to production data to determine the emissions from the different presses. The same fountain solution is used on all the presses. Its VOC content is 0.59%. They also use the same inks. Hickory wash is reclaimed.

All 6 presses have a material limit based on Rule 624(3). Press 6 has 2 of the 3 options in Rule 624(3) specifically listed in the PTI (at the request of the company). The other presses only have the 1st option listed. The company demonstrated compliance with all the inks using the >60% solids. The lowest was 89.5%-H₂O by vol. This is okay and I will suggest that the company ask for option 2 to be added at renewal since it is an equivalent requirement.

EUWebPress#6: The max 12 MRT emissions were 4.28 tons of VOC at the end of May, 2013. At the end of March it was 3.92 tons.

FGWebPresses: This is for Presses 1-3. The max pph for VOC was 4.89 in and the max 12 MRT was 18.90 tons in both in 8/13. The 12 MRT at the end of March was 12.68 tons and the pph was 3.56.

FGWebPresses2: This is for Presses 4&5. The max VOC 12 MRT emissions were 12.75 tons in 6/13. The 12 MRT at the end of March was 15.18 tons.

EUCarton290ETHAC: Monthly records show a maximum of 80# in 2/14. The use data comes from inventory records.

FGRule290: There are 7 gluers. They all use the same glues and it is not tracked per line. There are 2 glues with VOC. IPA and acetone are used to clean. Don had the records set up as each individual TAC being compared to either 20 or 1000 pounds/month. I explained that the 2 pollutants that have the 20# limit have to be added together to compare to the 20# and all of the other pollutants have to be added together to compare to the 1000# limit. It was obvious that they were below these limits from looking at the numbers. Don will redo the spreadsheet. The records show a maximum total monthly emission of 146.1# occurred in 10/13. The max for the pollutants allowed 20# was <0.5#.

At the end Spencer asked about the use of silicone spray cans. This is in cans and they spray it on the tables to lubricate them so the stacks of product slide easier. It contains hexane, part of which is n-hexane (HAP). The use has increased lately so they are looking at why and keeping an eye on it. The max was 388#VOC and 27.2 #HAP emitted in 2/14. This is exempt under Rule 287(b) but they should still track the HAP emissions and include in the source-wide HAP calculations.

I left at 11:30. On Wed. afternoon (5/14, 2014, Spencer emailed me a plan and pictures of what they had implemented for the short term and what they were working on as a long term fix to make sure that the used rags are kept enclosed. (See the attached email.) Since they have implemented a fix I will not send a violation notice but they should note this as a deviation in their ROP certifications.

NAME Dorothy Bohn

DATE 5/16/14

SUPERVISOR MA 5/16/2014