

May 7, 2018

Ms. Monica Brothers
Environmental Quality Analyst
Michigan Department of Environmental Quality
Air Quality Division - Kalamazoo District Office
7953 Adobe Road
Kalamazoo, Michigan 49009

RE:

Graphic Packaging International, LLC.

1500 North Pitcher Street, Kalamazoo, Michigan ROP Permit Number MI-ROP-B1678-2015

SRN: B1678



Dear Ms. Brothers:

Graphic Packaging International, LLC (GPI) is providing this information in response to the Violation Notice issued to GPI by the Michigan Department of Environmental Quality (MDEQ) on April 17, 2018, based on MDEQ odor complaint investigation conducted on April 16, 2018. Specifically, the MDEQ Violation Notice request that GPI discuss the date the alleged Rule 901 odor occurred, an explanation of the causes and duration of the alleged violation, whether the alleged violation is ongoing, a summary of the actions that have been taken and are proposed to be taken to correct the violation and the dates by which these actions will take place, and what steps are being taken to prevent a recurrence.

Please be advised that based on review of the mill's wastewater treatment system operations on April 16, 2018 by GPI personnel, we do not agree that the associated odors were of sufficient intensity, frequency and duration to constitute a violation of Rule 901 and General Condition 12(b), Section 1, of MI-ROP-B1678-2015 offsite of the mill along Riverview Drive, in the Riverside Cemetery and at Borgess Medical Center. Although not agreeing the odors associated with the wastewater treatment system constituted a Rule 901 violation, GPI remains committed to operating the system in a responsible manner and continuing to take all appropriate measures to minimize any potential off-odors.

To further reduce the potential for generating off-odors from the wastewater treatment system operations, GPI modified the wastewater treatment methodology in August, 2017 to incorporate the use of a hydrogen peroxide and peracetic acid product (Redoxx 60 supplied by Ecolab) to control potential sulfide odors. The Redoxx 60 product is continuously applied to the wet well at GPI's wastewater treatment plant to both add dissolved oxygen to inhibit anaerobic biological sulfide formation and oxidize sulfides. A biocide (Nalco 7648) is also added to control the sulfate reducing bacteria population along with sodium hydroxide to maintain the pH of the discharge from the clarifier in compliance with our discharge permit from the City of Kalamazoo.

We believe the switch to the Redoxx 60 product has improved the performance of the clarifier, reduced biological activity in the clarifier, and reduced the amount of hydrogen sulfide in the treated water discharging from the clarifier. All of these factors, we believe, have further reduced off-odors generated

from the wastewater treatment system operations. With respect to the mill's usage of odor reducing chemicals, following are the quantities of the above mentioned products during 2018:

Month	Caustic (lbs)	Redoxx 60 (lbs)	Nalco 7648 (lbs)
January	203,873	124,546	487
February	187,032	112,884	660
March	241,573	124,546	990
April	254,713	139,277	1,526

In response to the odor investigations initiated by the MDEQ on April 16th, GPI completed a thorough review of operation of the wastewater treatment system to identify any potential sources of off-odors. The area in and around the GPI wastewater treatment system does occasionally have intermittent off-odors whose source are difficult to pinpoint or predict.

One identified source is an intermittent odor emanating from the City of Kalamazoo's wastewater sewer main into which GPI discharges our treated wastewater. Periodically, our wastewater treatment operators identify off-odors which we believe originate from the City of Kalamazoo's wastewater treatment operations. Going forward, we will notify you when we identify any of these off-odors.

Additionally, we have also identified the filter building where the AES screens are used to polish clarified water, prior to reuse in the mill, as a potential source of off-odors. We are discussing this configuration with our wastewater treatment chemistry suppliers to determine whether any additional treatment means are warranted and/or appropriate.

GPI has also initiated a trial on a new process using Advanced Oxidation Processes (AOP) technology. The trial was initiated during the week of April 30th but we do not have any definitive results. This technology would potentially be employed in conjunction with the Redoxx 60 product to further minimize potential off-odors from the mill's wastewater treatment system operations.

Per MDEQ's request, GPI is documenting and improving our odor management activities and has contracted with our environmental consulting firm, Fishbeck, Thompson, Carr & Huber, to develop an Odor Management Plan (OMP). GPI requests that we have 60 days from the date of this letter to present the OMP to MDEQ for approval. GPI appreciates MDEQ notifying us promptly upon learning of these concerns which enables us to thoroughly investigate the situations in a timely manner. If you have any questions or need any additional information, please contact Mr. Gregg Lanternier with GPI directly at 978-971-8040.

Sincerely,

Graphic Packaging International, LLC

Richard W. Townley Resident Mill Manager