



RICK SNYDER
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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

June 2, 2015

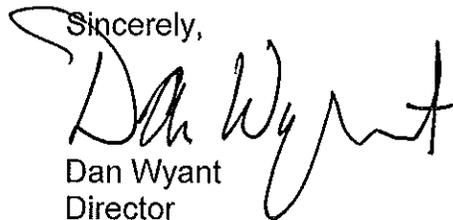
VIA E-MAIL AND U.S. MAIL

The Honorable Joseph R. Pitts
United States House of Representatives
Washington, DC 20515

Dear Representative Pitts:

Thank you for your letter of May 20, 2015, in which you provided additional questions from United States Representatives Susan Brooks and G. K. Butterfield concerning my testimony to the Subcommittee on Health at the May 1, 2015, hearing entitled "Examining Microbeads in Cosmetic Products." Enclosed are responses to those questions.

If you need further information or assistance, please contact Mr. William Creal, Chief, Water Resources Division, at 517-284-5470; crealw@michigan.gov; or Michigan Department of Environmental Quality (MDEQ), P.O. Box 30458, Lansing, Michigan 48909-7958; or you may contact me.

Sincerely,

Dan Wyant
Director
517-284-6700

Enclosure

cc/enc: United States Representative Gene Green
Mr. Graham Pittman, United States House of Representatives
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Ms. Madhu R. Anderson, Deputy Director, MDEQ
Ms. Maggie Pallone, Director of Legislative Affairs, MDEQ
Mr. William Creal, MDEQ
Ms. Kimberly Fish, MDEQ

Enclosure
Additional Questions for the Record

The following are answers to additional questions for the record posed by United States Representatives Susan Brooks and G. K. Butterfield in response to the May 1, 2015, testimony provided by Michigan Department of Environmental Quality Director Dan Wyant to the Subcommittee on Health.

United States Representative Susan Brooks

- 1. Are microbeads having different impacts on different parts of the country or are microbeads having a blanket impact on all U.S. waterways? Are there certain states where this is more problematic than others?**

Microbeads are expected to be present in waterways throughout the United States because the majority of wastewater treatment plants are unable to remove these small pieces of plastic prior to discharge. Research is currently determining the potential impacts of these microbeads on human health and the environment.

- 2. States are very active on this issue; can you all please provide insight on the state legislation currently pending? Are there a lot of different standards being put in place? If so, what are the primary differences in the legislation?**

Illinois was the first state to successfully pass a statewide ban on the manufacture and sale of personal care products containing microbeads. We are aware of at least eight other states where similar legislation has been proposed or passed. Four different bills have been introduced in Michigan. The most substantive difference in the proposed legislation is whether “biodegradable plastics” are exempt from the ban.

- 3. How would you define cosmetic plastic microbeads so that you don't unintentionally include other natural components?**

Recent proposed legislation in Michigan defines plastic as “a synthetic material made from linking monomers through a chemical reaction to create an organic polymer chain that can be molded or extruded at high heat into various solid forms retaining their defined shapes during their life cycle and after disposal.” The word “synthetic” implies that it is made by humans so it would not apply to natural components.

1. Are there any estimates about what proportion of microbeads in the Great Lakes are due to personal care products and what proportion are from other sources?

The microbeads found in personal care products are almost always less than 1 millimeter (mm) in size. The study that originally quantified the amount of microplastic pollution in the Great Lakes determined that 81 percent of the plastic particles collected were less than 1 mm in size. Pellets (i.e., microbeads) made up 58 percent of the plastic particles that were less than 1 mm in size.

2. What are the other sources of microbeads, other than personal care products?

No information was found on other significant sources of microbeads in surface waters. The study that originally identified large quantities of microbeads in the Great Lakes compared the microbeads they found to microbeads that were isolated from two national brands of facial cleansers and determined they were similar in shape, size, color, and elemental composition.

A report by the Minnesota Pollution Control Agency stated that “Some microbeads found in the environment are preproduction, meaning they spilled during transportation or manufacturing and made their way into surface water without first having been incorporated into a product. Microbead plastic powders are used to make many different plastic products, as well as [in] printing and coatings. Other microbeads are used in various kinds of polishes and cleaning products, including personal care products.”

It is noteworthy that personal care products, like facial cleansers and toothpaste, are the only sources of microbeads where it is presumed that the microbeads will be discharged down drains.

3. What has been the cost to the state of Michigan in attempting to clean up the microbeads?

Since no attempt has been made to clean up microbeads in the environment, there have been no costs to the state of Michigan.

4. Is reducing the use of microbeads more cost effective than more stringently filtering drinking water?

Preventing the use of microbeads in personal care products would be much more cost-effective than upgrading drinking water or wastewater treatment systems. We are unaware of any studies that have estimated the cost of upgrading drinking and wastewater treatment systems to screen out microbeads. However, the state of

New York determined that 403 of 610 wastewater treatment plants have no advanced treatment systems that would effectively remove microbeads. The remaining wastewater treatment plants had some sort of advanced treatment systems, but New York was not certain whether these treatment systems would effectively remove microbeads. Even though New York could not estimate the cost of upgrading all of their wastewater treatment systems, the sheer number of treatment systems that would need to be upgraded implies that this approach would be cost-prohibitive.

Proposing to modify treatment systems to remove microbeads would be illogical given that many of the manufacturers of personal care products are voluntarily removing microbeads from their products.