WCMU Response from MDDHS, with follow-up questions Joost van 't Erve, MDHHS Toxicologist May 9, 2023

Could I get a brief description of the methods on the Grass Lake study? When and how long monitors were collecting data, etc. Was mining ongoing during monitoring?

We used the same methods and equipment as the ATSDR exposure assessment for silica and dust in Wedron, IL.

https://www.atsdr.cdc.gov/HAC/pha/WedronSilicaExposureInvestigation/Wedron\_IL\_Silica\_EI\_H C-508.pdf

The first year we had 2 monitors at 2 locations for 7 continuous days in October and the second year we had 6 monitors at 4 locations (2 duplicates) for 14 continues days in August and September. Mining was ongoing when the sampling equipment was deployed.

I spoke to some Grass Lake residents and they expressed some concerns that the data collected from your study aren't representative of the conditions living next to the mine full-time, including the driest and windiest conditions. What considerations did you take to get a representative sample? Are you confident in the sample? Anything else you'd like to add in response to the residents' perspective?

The goal of the sampling was to measure the annual average for dust in the area. Our measurements captured average conditions over the year while still biasing it towards windier and dusty days that would not be seen in the winter months. For health conclusions, we use this annual average to evaluate if there are public health concerns. We also look to see if measured dust levels are comparable to other areas in the United State or are much higher. So, after the two rounds of monitoring we have a good idea of yearly conditions around the mine to make confident conclusions on health.

You had mentioned in the call that cost was a limitation in the health department's ability to conduct long-term sampling. I just wanted to confirm that with you.

These sampling were certainly costly, but cost was not a limitation to get the measurements that we needed for the health evaluation. The plan was to sample for a shorter term, evaluate the data to see if there are huge day-to-day changes or immediate issues and then see if more monitoring was needed. This is why we expanded the second year to more monitors and a longer time so we could draw better conclusion. After the second year, the data was sufficient to do the evaluation, so we didn't need to do more.