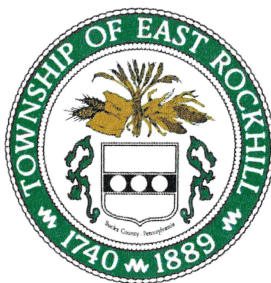


# EAST ROCKHILL TOWNSHIP



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July 28, 2022

Via Electronic Mail to [RShustack@pa.gov](mailto:RShustack@pa.gov)

Randy Shustack  
District Mining Manager  
Department of Environmental Protection  
Pottsville District Mining Office  
5 West Laurel Boulevard  
Pottsville, PA 17901

Re: Activity-Based Sampling at Rock Hill Quarry

Dear Mr. Shustack:

On behalf of East Rockhill Township (“Township”), this office and other Township consultants have reviewed a letter from Hanson Aggregates Pennsylvania LLC (“Hanson”), dated June 24, 2022, in which Hanson provided the results of sampling conducted at the Rock Hill Quarry (the “Site”) on June 1, 2022. Please accept the following comments on behalf of the Township.

## **Background**

On April 12, 2021, the Pennsylvania Department of Environmental Protection (“PADEP”) sent to Hanson an Elevated Review Technical Deficiency Letter which in part requested that Hanson propose air monitoring procedures to detect asbestos that may be disturbed during mining activities. Hanson responded by letter dated July 6, 2021. On October 21, 2021, in response to Hanson’s letter dated July 6, 2021, PADEP requested that Hanson develop and submit to PADEP for approval and execute an activity-based sampling program to gain an understanding of asbestos exposure at low levels of activity (driving vehicles onsite, moving piles, etc.) to allow PADEP to evaluate the extent to which removal of 500 tons of minerals per year could cause naturally occurring asbestos fiber migration.

On December 6, 2021, Hanson responded to PADEP’s letter dated October 21, 2021 and provided a Limited Activity Events Sampling Plan. On February 1, 2022, Hanson sent PADEP a revised Limited Activity Events Sampling Plan (the “Sampling Plan”). The Sampling Plan proposes several categories of limited activities, but it does not include activities that are among the highest dust emitting activities, including but not limited to blasting, drilling, crushing, excavation, and bulldozing, where rock would be detonated, crushed, and otherwise disturbed on a more continuous basis. PADEP conditionally approved the Sampling Plan by letter dated February 28, 2022.

On June 1, 2022, Hanson conducted the first activity-based sampling event, which consisted of driving three trucks around the Site for 2 - 2.5 hours at an average speed of approximately 7 mph. Hanson collected a total of eight samples, one from each of the eight monitors. On June 24, 2022, Hanson reported the sample results to PADEP.

### **Comments on Hanson's Activity-Based Sampling**

#### **1. Hanson's sampling was significantly diluted and not representative.**

Hanson's monitors function by pulling air through a filter cartridge by a positive displacement pump. The pump is calibrated so that the flow rate of air through the filter is known. The flow rate can then be multiplied by the amount of time that the pump operates to calculate the total volume of air that passes through the filter. According to the lab report, the total volume of air that passed through the filters varied between 874 to 987 liters of air per sample. Hanson contracted with RJ Lee Group, Inc. ("RJ Lee") to analyze the samples. According to the lab report, RJ Lee only analyzed 0.1% of the filter cartridge area under a microscope. Any reportable fibers counted in this area would then be extrapolated to the total filter area. The result is a total number of fibers collected on the filter from a known volume of air, which can be represented as fibers per  $\text{cm}^3$  (fibers/cc). PADEP has set an action level of 0.001 fibers/cc, and therefore if 950 liters of air have flowed through a given monitor, there would need to be 950 fibers in the total filter area for the action level to be met, meaning that if RJ Lee counted only 1 fiber in the area analyzed (which would be extrapolated to 1,000 fibers in the total filter area), the total concentration (assuming a volume of 950 liters) would be approximately 0.00105 fibers/cc, which would exceed the action level. The volume of air that passes through the filter and decisions on whether to count particular fibers could therefore have a dramatic effect on the results and whether the action level has in fact been exceeded.

Hanson's sampling on June 1, 2022 was not representative of the activity that was intended to be analyzed (i.e., driving three trucks around the Site). The activity took place over a period of approximately 2 - 2.5 hours, but the samples were collected over a period of 9 hours, meaning that a majority of the air that passed through the filters was not representative of the activity. Hanson's Sampling Plan suggests that this was necessary to ensure that a sufficient volume of air would pass through filter. However, Hanson could have instead (1) set a higher flow rate to collect the same volume of air over a shorter period of time to focus only on the activity and not on conditions while the activity was not occurring and/or (2) driven the trucks for a longer period of time instead of collecting 6 - 6.5 hours worth of samples that were not representative of the activity.

Had Hanson increased the flow rate and/or increased the duration of the activity so that the samples were representative of the activity, the probability of detecting a reportable fiber would have increased by more than 3x. Furthermore, Hanson did not provide the backup test data with its sample results, and therefore PADEP and the public are unable to analyze the data to determine whether Hanson properly counted reportable fibers.

Additionally, RJ Lee's reported 95% confidence interval for each of the measurements was 0 - 3 fibers, which works out to a confidence interval of approximately 0 - 0.00315 fibers/cc when converted to the units of the action level. Therefore, there is a chance that the results were actually more than 3x the action level, and an even greater chance that the results exceeded the action level to a lesser degree.

**2. At least half of the monitors were not located downwind of the activity.**

The wind data reported by Hanson indicates that the wind direction on June 1, 2022 was generally to the southeast at 1.8 - 7.6 mph. Based on the wind direction and the path of vehicle traffic, it appears that only three or four of the monitors (M3, M4, M5, and possibly M2) were located downwind or otherwise near any part of the activity that would have allowed for the potential to detect asbestos fibers generated from the activity. In fact, it appears that only one monitor (M5) was downwind of more than a de minimis level of the activity. The remaining eight monitors (M1, M6, M7, and M8) were not located downwind of the path of vehicle traffic and therefore were not representative of the activity. If Hanson's activity-based sampling is to be representative, the monitors should be placed in locations downwind of the activity, and PADEP should direct the locations of the monitors based on conditions observed on the day of sampling.

**3. Hanson did not report humidity levels.**

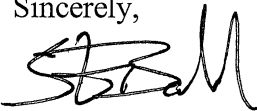
PADEP's conditional approval letter dated February 28, 2022 required Hanson to "install an autonomous weather station at the Rock Hill Site to monitor and record wind speed, wind direction, humidity, temperature, and precipitation data prior to activity-based sampling." PADEP required this data to "be recorded on a weather station data logger and realtime data should be available for review on the station display panel." The results provided by Hanson in its letter dated June 24, 2022, do not contain data on humidity. PADEP should request this data from Hanson with respect to the activity-based sampling conducted on June 1, 2022 and should ensure that this information is provided in any future reports of sample results.

**4. PADEP should correct these flaws in Hanson's sampling methodology before authorizing additional activities.**

As designed and implemented, Hanson's Sampling Plan does not provide for sampling that is representative of the activity at issue and therefore cannot enable PADEP or the public to evaluate the extent to which the activities contemplated by the Sampling Plan could cause naturally occurring asbestos fiber migration. In a letter dated July 13, 2022, PADEP authorized Hanson to proceed with the second and fifth events under the Sampling Plan, which would include (1) the delivery and unloading of a rubber-tire loader delivered on a flat-bed trailer (with use of a water truck); and (2) simulated site maintenance activities, including the clearing of brush and road maintenance. The Township requests that PADEP reconsider its approval and require Hanson to correct the flaws outlined above before proceeding with any remaining activities.

Thank you for your consideration of these comments.

July 28, 2022  
Department of Environmental Protection  
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Sincerely,  


Steve Baluh  
Township Engineer

cc: Township File  
Marianne Morano (via email)  
Thomas M. Duncan (via email)  
Suzanne Schiller (via email)  
William Hitchcock (via email)  
Will Oetinger (via email)  
Steven Baluh, P.E. (via email)  
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