



TO: Mineral License Board, Sharon Township  
FROM: Sharon Preservation Society  
DATE: 08-MAY-2022  
RE: Outstanding Questions for Aggregate Industries (AI) and Mineral Licensing Board re: M-52 mine expansion

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Below please find questions that we believe should be answered by AI, preferably in writing.

**Regarding air quality:**

We would like the issue of crystalline silica dust addressed in more detail.

- AI states that there is little or no silica present in the mining material. AI will not be able to prove this: the material they want to mine, glacial outwash, contains sand that is at least 20-25% quartz, which is silica. Our understanding is that this is basic geologic knowledge. While this may not be the same amount of quartz found in some mines, it is sufficient to create a health hazard. **How will AI monitor the crystalline silica dust that is likely to be dispersed during mining activity.**
- We are attaching a page of other citations regarding a growing recognition of the dangers of silica dust. **How does AI respond to these citations? What evidence can it provide that will ensure there is no danger posed to Sharon Township residents from airborne silica dust?**
- **Will AI submit its fugitive dust plan in writing** to respond to these questions:
  - What is the fugitive dust plan for the operation?
  - How will the operation contain the dust from: the crushing operation; exposed areas in the mine; trucks entering or leaving the property; the surface of stock piles?
  - How fine is the material that will be trapped?
  - How will the applicant ensure that fugitive dust will not impact homes downwind from the operation?

**Regarding surface and ground water concerns:**

**Has AI obtained the EGLE permits (Part 301 and 303)?**

**Is AI willing to provide baseline testing of water quality and pressure for all residential wells within a 2000' radius of the pits?**

Questions based on the recent Fishback Hydrogeological Study:

- The borings that are shown do not reach the depth of the mining. (The application states the lake bottom will be at 50', and the operation plan shows the pit bottoms at 60-70' below the top of the pit.) The borings that are shown only go 45' deep. **How does the operation know what it will encounter as it mines below the water table?**
- All the geological information should be presented. The reason of confidentiality (information from 13 of 19 borings is not included) is pretty weak for a sand and gravel deposit. Isn't this information required by the MZEA? **Why is the information confidential?**
- Geological cross sections are not included in the hydrogeological report. These are common figures for hydrogeology studies. They demonstrate how the different layers of geological material (with different hydraulic properties) are related to each other, and the information they provide can potentially alter the mining plan. **Why are the cross sections not included? Should the operation need to alter its plans after mining begins, will it inform the township?**
- There appears to be waste material present in the boring logs presented. **How much is there and how will it be managed during mining and at reclamation?**
- In addition to a gentle slope to the future lake bottom, sand should be specified to at least a similar depth. This would make the closed mine more favorable for residential or recreational development. Sufficient land should remain around the lake to allow for development. **Will the reclamation be suitable for residential units (tax revenue for the township)?**

**Regarding traffic safety:**

- Has MDOT already granted permission to create the tunnel under M-52? If not, what plan will be put in place to avoid accidents caused by slow moving trucks transporting material between the west and east sides of M-52?
- What is the haul route for this mine? Will it haul south on M-52 as well?
- What is the maximum weight of the trucks leaving the site? What is the stopping distance for a gravel truck carrying the maximum weight if moving at 55-60 mph?

**Regarding general operations:**

- Please confirm that there will be no blasting or other explosive work on the site.
- Please confirm the hours of operation.

## Citations regarding health hazards posed by silica dust

Here are several documents or recent studies. **How does AI respond to the concerns raised in these articles?**

1. Attached: "Crystalline Silica Dust – the Invisible Killer," a document prepared by the Friends of Platte River Watershed. This group studied local wind speeds and showed how far silica dust can travel. We have a wind study done near our township (Chrysler Proving Grounds) – a location selected because of its potential for a wind farm.
2. <https://www.statnews.com/2019/10/10/silicosis-outbreak-malignant-neglect-of-osha/>  
This article, written by a former OSHA Director, discusses silicosis in employees of small granite cutting and polishing operations. A quote from the article: "The Centers for Disease Control and Prevention recently reported [18 cases of severe silicosis](#), including two deaths, in four states among workers producing these countertops. Sixteen of those affected are Hispanic and two are non-Hispanic African-Americans. More cases will undoubtedly appear, since wherever this material is used it has caused disease: Dozens of workers in [Spain, Israel, and elsewhere](#) are awaiting lung transplants, their ability to breathe destroyed by silica dust."
3. <https://www.npr.org/2022/04/13/1092690291/researchers-say-theyve-linked-silica-dust-directly-to-severe-black-lung-disease>  
In this report, the reporter investigates the effect of silica dust on the lungs of coal miners. Note that silica dust is the same whether it comes from a gravel pit or digging through sandstone in a coal mine. "...the Exposure to a toxic rock dust appears to be "the main driving force" behind a recent epidemic of severe black lung disease among coal miners, according to [the findings of a new study](#). Lawmakers have debated and failed to adequately regulate the dust for decades. The study, which examined the lungs of modern miners and compared them to miners who worked decades ago, provides the first evidence of its kind that silica dust is responsible for the rising tide of advanced disease, including among miners in Appalachia."
4. **U.S. Geological Survey, Mineral Commodity Summaries, January 2021**  
"Additionally, the industrial sand and gravel industry continued to be concerned with safety and health regulations and environmental restrictions in 2020, especially those concerning crystalline silica exposure. In 2016, the Occupational Safety and Health Administration (OSHA) finalized regulations to further restrict exposure to crystalline silica at quarry sites and in other industries that use materials containing it. Phased implementation of the new regulations was scheduled to take effect through 2021, affecting various industries that use materials containing silica. Local shortages of industrial sand and gravel were expected to continue to increase owing to land development priorities, local zoning regulations, and logistical issues, including ongoing development and permitting of operations producing hydraulic-fracturing sand. Natural gas and petroleum operations that use hydraulic fracturing may also undergo increased scrutiny. **These factors may result in future sand and gravel operations being located farther from high-population centers.**"