FACT-FINDING COMMITTEE
SPRINGFIELD TOWNSHIP
12000 Davisburg Road, Davisburg, MI 48350
Monday, November 3, 2025
1:00 P.M.

The meeting was called to order at 1:10 P.M. by Trustee Sclesky

MEMBERS PRESENT:	Kevin Sclesky, Township Trustee/Planning Commissioner Sarah Richmond, Parks and Recreation Director Gerald Fisher, Township Special Counsel
RESIDENTS PRESENT:	Amanda Gruzin Kara Okonewski
OTHERS PRESENT:	Mike Wilczynski, Pangea Environmental LLC Brian O'Mara, Agate Harbor Advisors LLC Danielle Sink, Supervisor's Assistant Joelle Talerico, Clerk's Assistant/Recording Secretary Chris Comstock, IT Administrator

Trustee Sclesky began the meeting by stating that Supervisor Davis is no longer going to attend these meetings as he wants to ensure there are no optics of possible steering of any decision making that would be presented to the Planning Commission. All documents that stem from this meeting and any future meetings will follow a chain of custody process for any information that is going to be presented to the Planning Commission.

Mike Wilczynski began with his presentation by providing an overview of legal terms and the framework that they must work in as Geologists, Hydrogeologists, and in any permitting of mines. He also gave a brief overview of his background in Geology and Hydrogeology. He noted that residents' concerns consist of water issues, noise, dust, traffic, the idling of trucks, diesel particulate matter, noise and vibrations from the trucks and mining equipment, property value depreciation, and reclamation and loss of farmland. He stated that sand and gravel form our aquifers, the basis for our lakes, and most of our surface water. In Michigan, 90% of some creeks are groundwater reaching the surface. Because sand and gravel occur in these protected environments, there can be conflict. He provided an overview of the geology of the proposed site stating that the material here is glacial till and glacial outwash which is caused by glacial retreat. The glaciers depress the land surface while moving forward and deposit materials within the ice going backwards. An end moraine, which is a ridge, is the result of a retreating glacier sitting and moving forward and back depending on climate. This process, which occurs over thousands of years, results in the accumulation of sand and gravel. A ridge consists of glacial till, which is various sizes of sand and gravel, and the finer material, stratified drift or outwash, is deposited in front of the retreating glacier. Therefore, the further away from a moraine, the finer the material gets because the water velocity drops and carries smaller material. Within these glacial materials are ice blocks that are buried. When they melt there's depressions in the ground and these form wetlands and lakes. When you see lakes in this area that aren't the result of dams, they're most likely a result of a buried block of ice that was buried by stratified drift, which then melted and left a hole in the ground. He stated that there is an Esker on the property. An esker forms on the bottom of a glacier and is like a river in reverse. Instead of being a depression in a valley, it's a positive relief. He continued by saying

that glacial till consists of large boulders, sand, and gravel of all different sizes. This material generally needs to go through a crusher to break up the larger pieces. He noted that angular material is actually better in pavement because it interlocks and it doesn't slide as much as round material. He continued by saying that stratified drift or outwash is the kind of material that would carry blocks of ice and give you the kettle lakes. Sometimes the till has a lot of clay in it, and not many boulders. On a geologic map, the proposed mine site sits right at the edge of a moraine and therefore consists of sand and gravel.

He continued by highlighting the Michigan Zoning Enabling Act which states only certain reasons that a mine can be denied because of the result of very serious consequences. These very serious consequences are: relationship of extraction with existing land uses, impact on existing land uses, impact on property valuation, traffic and pedestrian safety, impact on health, safety and welfare, and interests and the public interest in it. As geologists, we can help in many of these and also in the permitting processes. The state does very little when it comes to permitting sand and gravel mines. They do get involved at certain times if there is surface water or wetlands. A part 301/303 permit is needed if you're creating a lake five acres or larger and if wetlands five acres or larger are going to be impacted. This would include the wetland having a special interest or if they are within 500ft of surface water and are regulated. Part 327 consists of a ground water permit and would be required if the site is pumping 70 gallons per minute. In their application, Levy states they are only pumping 30 gallons per minute, he feels this is on the light end. Part 55 is an air permit. This is a general permit where a fee is paid, and the applicant agrees to comply with certain conditions. There are no air monitoring requirements for the air permit. Part 91 consists of a soil erosion sediment control plan and generally comes from the county.

Special Counsel Fisher asked if there are federal regulations for air quality.

Mr. Wilczynski stated there is no required ambient air monitoring by federal standards.

He continued by stating that wetlands that are identified on the National Wetland Inventory and other maps and soil areas, which include wetland soils are approximate, as they're done on a desktop. The last wetland survey that was done was in early 2000 and expired in 2005. Therefore, this will need to be redone and must be done during the growing season which will require in-person, on site mapping and surveying. He continued by stating that the hydrogeological reports submitted by HLA and Barr are missing geological cross-sections. When borings are done on a site, they must be organized to be able to interpret the data and information of the soil. When there are outwash deposits right next to a moraine, you get an interlocking inner bedding of sand and gravel which influences the groundwater flow. As the water flows down, it's going to stop as soon as it hits its first impermeable layer like a clay and will form a water table there. But, there could be multiple clay layers that this happens at therefore there could be multiple perched aquifers in one area. This is why a cross section is needed to really see what's going on. He continued by saying that they need to go probably about ten feet deeper than the proposed mine, just to get a feel for what's there and to know if they're going to be able to create the lake that's in their reclamation plan. Levy has proposed that they will be wet mining, but until they get down to the water table, it's going to be dry mining. So, they will be removing the sand, gravel, and water, pumping it to another location. One of the concerns is that 5% of the material is fine material based on their testing, which is called slimes. This is material that really can’t be used; therefore, the management of that material becomes important. He also noted that Levy has stated this will be a closed loop system, but it isn't because the water is coming from “A” and being discharged “B”. Based on ground water flow, it will not be recharging where it's coming from. A closed loop means you're recharging it where you're pulling it from. Another concern is if water is pulled from a deep aquafer, sometimes poor-quality water is pulled up that could contain hydrogen sulfide (which forms into iron sulfide) and arsenic. Oakland County has a lot of arsenic in the groundwater naturally and this is because of pyrite or Cenozoic pyrite that were in the bedrock formations. In addition to arsenic, there can also be elevated nitrates from

farming activity, fertilizer, and animals. He continued by saying that Springfield Township has a Superfund site that is a mile away. A summary that was available online proved the plume of contaminated groundwater is moving to the north. Pumping groundwater can change the flow direction and start pulling a plume therefore this is something that Levy will need to address. Lastly, if there are more than 70 gallons of water pumped per minute, a test will need to be done, and EGLE determines if there needs to be a site-specific review or not. This test looks at withdrawal of water on surface resources.

Brian O'Mara stated that he and Mr. Wilczynski have about 80 years' experience in consulting work, working for agencies, working for private companies, and mining companies and they're applying their experience with geology, the permitting process, and commenting on what other people have done. He noted that their role is to advise the township as to the adequacy, the facts, if there's deficiencies, or if there's data gaps. It is on Levy to provide any missing information and today he and Mr. Wilczynski are just providing their initial impressions of the materials provided and what they see as ways that it could be improved.

Trustee Sclesky stated that there was a list made up at the last meeting of the information that the township would want the applicant to produce for review. He asked if this list is going to be discussed.

Mr. Wilczynski stated that there was a list of items that Levy may have that could be provided to the Township without a lot of work needing to be done.

Trustee Sclesky noted that he will need to follow up and find out where the Township is at with obtaining the information as requested.

Special Counsel Fisher asked Mr. Wilczynski and Mr. O'Mara if they would call their review at this point a tabletop review.

Mr. O'Mara stated he would consider it a desktop review. Essentially this means they're just reviewing reports, as they haven't gone into the field to take any samples. He stated that it's rare to actually do any sampling. They can walk around the site, but in most cases they're not the ones going out with the drill rig and taking additional samples. He noted that Levy was talking about doing an aquifer pumping test, which will be important. All the other reports that have been submitted are based, for the most part, on desktop reviews. This means Levy is taking the information from other people and compiling it. He stated that there has been a lot of work done at the site, for example, the 25 wells that Levy has been studying for many years. He noted that he and Mr. Wilczynski have gone through and listed what they'd like to see from Levy on various things, if Levy has this information.

Trustee Sclesky stated that on the 25 wells, he believes they've been doing monthly analysis on it since 2008. He asked if this is their conclusion also.

Mr. Wilczynski stated that they're taking water levels, but they haven't sampled the water. He'd like to see some groundwater sampling for nitrates, arsenic, and herbicides. These are things that would commonly be associated with agriculture.

Trustee Sclesky stated that in his review of those reports stemming back from 2008, some of the wells have been taken offline. He asked what a reason would be to take a well offline.

Mr. Wilczynsky stated that it could have been destroyed or deemed unnecessary.

Trustee Sclesky asked for clarification that this would not be uncommon.

Mr. O'Mara stated no, as sometimes a well can get silted up or become fouled with minerals. He stated that this pump aquifer pumping test will be crucial. Evaluating a well is going to tell them what's happening at basically a pinpoint, but with several hundred acres. These wells will only show little snapshots across the site. The pumping test will actually draw water from a large area, and they'll be able to evaluate those results and predict what the mine operation could do to the shallow wetlands and other water table aquifers and the confine aquifer. This will provide a lot of information that will help him and Mr. Wilczynski make recommendations to the Township on how to proceed.

Special Counsel Fisher asked how they are testing the pressure or the quantity of water.

Mr. O'Mara stated this would be determined by the pumping test. A pumping test is done by installing a well with a constant pump of water. This results in drawing water out and water levels going down in certain areas. They'll measure the response of the aquifer as the pumping is happening. Those water levels can be considered pressure values as well.

Mr. Wilczynski noted that this will also show the impact on surface water, the measure of the surface water within that area, and the connection to the groundwater and how far the impact will go from pumping.

Special Counsel Fisher asked if this analysis is done during the whole duration, once a year, or if this is a one-time thing.

Mr. O'Mara stated that it's using sort of a pre design study, but based on the results of the pumping test, they can predict better how it will behave and how the mines lasting effect will be in the community in the future. He stated that this is a good thing that they're planning to do.

Mr. Wilczynski stated that the pumping test is generally run for between 24 and 72 hours, using multiple observation wells, and deciding on how they're doing a step test before that to determine at what rate they want to run the public test and to make sure to stress the aquifer enough.

Amanda Gruzin asked for confirmation that the pressure test is going to run for 1 to 3 days.

Mr. Wilczynsky clarified that it is called a pumping test and yes because it gives an idea on how the aquifer would behave as groundwater is extracted from it. This will provide results in hydraulic conductivity, transmissibility, and any boundaries it may have to the aquifer.

Special Counsel Fisher stated that all these test wells are at various depths.

Mr. O'Mara stated that most are in the water table.

Mr. Wilczynski stated this is why having cross-sections is important as it will tell them where there's screen, which wells should be used for data, which wells are valid for valleys and water table versus the deep rock.

Mr. O'Mara stated that from what he could see most of them are shallow so it must be known where the wells are screened as they're doing the evaluation. They might have to do some additional deeper wells, but the pumping test should help with that.

Mr. Wilczynski stated that he is not sure they have any borings with wells that go as deep as they're proposing to mine. He stated that he is unsure of the total depth of the mine. He noted that this should be considered a preliminary review because they don't have all the information.

Trustee Sclesky stated that with this information and with the agreement between the Township and Levy, Levy has the opportunity to review this before anything is released.

Mr. O'Mara provided a brief overview of missing reports in the Levy application with respect to very serious consequences:

- property values and/or depreciation of value-no study provided.
- Dust and noise studies- Would be helpful if Levy could provide data from other mining sites in the area. If not, could they provide samples.
- Traffic studies- traffic study was done, but a traffic safety study needs to be done.

Trustee Sclesky noted that some of the questions regarding traffic safety were answered at the last Fact-Finding Committee meeting with the Road Commission for Oakland County.

Special Counsel Fisher asked if it matters how close the homes are to the road.

Mr. O'Mara stated regarding dust and vibration, yes. He continued with his overview of missing reports:

- A noise and vibration study is needed which needs to incorporate truck traffic and mining equipment.
- Geologic cross-sections are needed
- Sections or profile views of the proposed mine pits and phases of the reclamation plan with a view of each of these faces from north, south, east, and west.
- Groundwater and surface water quality data is needed. Sampling could be collected while they're doing the aquifer pumping tests.
- Results of the pumping test are needed.
- A 3D groundwater model would be helpful in evaluating the different phases of the life stages of the mine over time.
- Well records are needed from within one half mile of the proposed mine.

He continued by stating that he would like to see contingency measures and how Levy is going to deal with situations that may arise and how they will mitigate any potential issues.

Mr. Wilczynski stated that he would like to see details of the transporting of materials. If they're using water as carriage water to transport material in a pipe, this can use significant volumes.

Mr. O'Mara reiterated that he would like to know more about their process including the management of silts and clays

Mr. Wilczynski also reiterated that if water is pulled from deeper in the aquifer, it may have a high

amount of iron in it. If it is then pumped to the surface and discharged where there's oxygen, this will oxidize it, and it basically turns into rust. It then becomes insoluble and can create an iron film.

Mr. O'Mara stated that these are things that Levy has probably dealt with on other sites. He stated another big item is the reclamation plan. He would like to ask Levy some questions related to the topography, anticipated lake levels, and vegetation.

Trustee Sclesky noted that this was part of Levy's presentation when it was first introduced to the Planning Commission.

Mr. O'Mara stated that he reviewed this, but typically on these sites the operator is required to have a more detailed plan because typically they must post a financial assurance mechanism, such as a bond or some credit, which is tied to reclamation. Therefore, there is typically a cost per acre.

Mr. Wilczynski stated that the problem he saw was with the density of housing in their reclamation plan. He stated that it will be impractical without having municipal water and sewer. The county doesn't like putting septic systems on inland lakes anymore and with the houses so close together, it won't be suitable if you're going to have to run septic and wells. He feels the reclamation plan they have is only viable if there are municipal services.

Mr. O'Mara noted that the septic tanks will eventually contribute to the lake. He continued by noting the washing plant and the separation of the sand and gravel into different sizes. This is going to use a lot of water for a million gallons a year, but there's opportunities to recycle, and he believes they will. The management of all the fine materials and where they are going to go is critical and Levy needs to have a plan for that. He stated that more details are needed on possible crushing operations. In these glacial tills, there can be a wide variety of boulders and sands, therefore, details are needed on what they are going to do with these. Typically they will crush them and make them into the angular aggregate but they need details on crushing operations, such as hours and controls. He stated that Levy needs to provide more backup documentation on the reclamation plan regarding quantities and unit rates. This way the Township will have something that they can, if necessary, go back and say, this is what we base your bond on, and we're assuming that Levy will reclaim the sites to these standards. He continued by stating that there has been a lot of good work done overall in the application, but there were data gaps that need to be closed before the township can make an informed decision.

Special Counsel Fisher asked if Levy is aware of what the gaps are.

Mr. O'Mara stated yes, they should be.

Director Richmond stated that one of the concerns that has been brought up many times is the concern for the Prairie Fens and the impact this mine will have on them. She asked Mr. Wilczynski and Mr. O'Mara if they could derive any information on how it will impact the Fens and the water levels.

Mr. Wilczynski stated that he doesn't want to comment on geology or hydrology until he sees cross-sections. He noted that the contributing area for a Fen can come from a long way away and he has concerns about any possible fens that are to the west.

Director Richmond stated that there are remnant fens in multiple areas within the township such as Mill Pond Park, which was discovered after the dam was removed, and Long Lake Fen, which is the biggest fen in this area. There has been a significant amount of research that has been done in these areas with endangered species such as the Poweshiek Skipperling and other endangered and unique species of mussels and fish in the rivers, as well as all the plant life that could be impacted greatly.

Mr. Wilczynski stated that Levy would have to do an ecological study and then they would have the township review it.

Director Richmond asked if there would be any test that could be done as to how the mine would be affecting the fen that's a mile away.

Mr. Wilczynski stated that it's going to be hard to say yes or no and he doesn't want to comment any further until he sees the data.

Mr. O'Mara stated that the pumping test will tell more.

Mr. Wilczynski stated it will show a little bit more on how far the radius of influence is.

Amanda Gruzin asked for clarification on what material Levy wants the most.

Mr. Wilczynski stated they want Till.

Ms. Gruzin stated that they're seeing the Holly Tindall mine expanding. She asked if Springfield Township is at risk of Levy possibly wanting to go to the other side of Ormond Road, even though they don't own the land.

Mr. Wilczynski stated that this could be a potential.

Ms. Gruzin noted that she found it interesting that the last wetland study was done so long ago and expired in 2005. She asked how long a wetland study stays good for.

Kara Okonewski stated that they are good for three years. The last one was done in 2002 and expired in 2005.

Ms. Gruzin asked what would be considered the growing season.

Mr. Wilczynski stated April through September or October. Plant species must be able to be recognized, and it would be weather dependent.

Director Richmond stated wetland work is typically done here starting in May.

Kara Okonewski noted that this would especially be the case if they want to hit Vernal pools, which are temporary pools of water that host specific wildlife, before they are gone.

Ms. Gruzin asked for clarification that the pumping test won't reflect how far of an effect the mine will have.

Mr. Wilczynski stated that this test is done to determine how much the aquifer can safely yield and then to see how far out it is going to be getting its water from.

Director Richmond asked if there is a better pumping well that Levy should be doing the pumping test from.

Mr. Wilczynski stated that there must be one dictated as a pumping well, and this all depends on the aquifers that need to be tested. For the simplest case, there will be a pumping well that's removing the groundwater and observation wells at different directions and distances where pressure transducers are installed to record the water level changes over time. This data is then uploaded and analyzed on a computer.

Director Richmond asked if ideally there would be a pumping test in each aquifer area.

Mr. Wilczynski stated that this is another reason as to why they need cross-sections, as they are the key part of any hydrogeological study.

Ms. Gruzin asked if in a perfect world, would there be a pumping test for every aquafer.

Mr. Wilczynski stated if it's going to be impacted. But if they're not impacted, no. He stated a big issue is what the impact on surface water will be. If they're going to pump in a confined aquifer, is that confined aquifer connected to the shallow aquifer? By pumping, you can see a change in the water level in the surface water, or you'll see a change in the drawdown rate. You can start to see if it's impacting surface water, if it's going to pinch out and what it can safely yield and how far away you'll be pulling the water.

Ms. Gruzin asked what is a shallow well, 100ft or less?

Mr. Wilczynski stated yes, there must be 25ft of separation between the wells screen and the surface.

Ms. Gruzin asked how current the data is on the number and depth of the surrounding wells.

Mr. Wilczynski stated that it's fairly current.

Ms. Okonewski stated that the Michigan Geological Survey had a presentation in 2024, and currently they've only said that 33% of what they've been able to establish in Oakland County are correct wells at properly located depths. So there could be potentially a lot more wells and a lot of missing information on these wells because it appears as though the mapping data has not been kept up with.

Director Richmond asked for clarity about pumping the groundwater and pulling the plume of contamination northwards. She asked how far northwards that could potentially pull.

Mr. Wilczynski stated they would know when they do the pumping test.

Special Counsel Fisher asked for clarification about whether this is a closed system or not.

Mr. Wilczynski stated that he doesn’t believe it's a closed loop system because the water is going to be taken from a confined aquafer and is then going to be discharged to another confined aquafer.

Trustee Sclesky closed the meeting by reminding the Committee Members that the information discussed today must be reviewed by Levy to ensure the Township stays in compliance with the agreement. He thanked everyone for their time.

Meeting adjourned at 2:21 PM.