

## **ATTORNEY-CLIENT WORK PRODUCT**

November 6, 2025

To: Ric Davis

cc:Gerry Fisher, Brian O'Mara

Subject: Interim Report - Initial Review of EC Levy Mine Application

Ric, at your request this Interim Report was prepared. It summarizes the status of the review of the geology and hydrogeology part of the application. Geological cross sections are a key part of a hydrogeological report and none were presented. This makes a review of the geology difficult, so the review is far from complete and should be considered preliminary at best.

These cross sections would show the soil type, depth/elevation and groundwater occurrence at a minimum. For a project this size I would expect several cross sections. Some of these need to tie into surface water.

The geological description in the application material describes the geology as interbedded sand gravel and clay; a typical sand and gravel deposit. Because of this description we can expect the potential for perched aquifers to exist. The production well is described as being completed in an aquifer beneath a clay. We assume this is referring to a confined aquifer. A pumping test (referred to in communications as a draw down test) will tell a lot about the geology and relationships among groundwater and the numerous surface water features. It may also answer the question many have about the potential impact to the prairie fen. Additional prairie fens may exist in the protection area overlay west of the proposed active mine. I still need to do a flyover.

Prairie fens are rare worldwide and only exist in a particular type of glacial geology setting. South central Michigan has a concentration of these rare wetland types. Small changes in water chemistry can destroy these features and the flora and fauna that rely on this type of water. It is high in calcium and magnesium and has an alkaline pH. This environment can support endangered and threatened species. An ecologist will be needed. Mike Kost at U of M is excellent. We testified together in a lawsuit against EGLE and Waste Management of MI. I know others. I'm working with Spencer Kellum in Genoa Twp reclaiming a 100 yr old mine. He may have more availability than Mike Kost.

Arsenic in groundwater above regulatory limits is a problem in Oakland County and others in the state. The arsenic is naturally occurring and the result of minerals in the soil and bedrock. Nitrogen as nitrate can be present in the shallow groundwater above the drinking water standard (Part 201 of NREPA and Clean Water Act) from agriculture. Groundwater sampling from selected monitoring wells should take place. We also believe an ongoing groundwater

monitoring program be instituted because of potential changes in groundwater chemistry as mining progresses.

Although wet mining will occur, dry mining will occur until the water table is reached. That may be a fair amount of time. We would also like to see the soil borings and some monitoring wells to extend to the depth of the mine plus about 10 ft. The current reclamation plan does not appear to work well with the hydrogeology of the site.

Regarding groundwater use and disposal, if groundwater is taken from one aquifer and released after being used for processing to another aquifer, that is not a closed loop hydraulic system. This was explained with photos of an operating mine in more detail during my presentation.

There are several USEPA Superfund sites in Springfield and adjacent Rose Twps. The Springfield Twp Dump is the closest and to the south. The plume of contaminated groundwater is moving north according to the USEPA. More detail will be needed. Contaminated groundwater is a problem with the Metamora proposed mine. 3D computer modelling may be needed to evaluate the groundwater conditions at the proposed mine on Ormond Rd.

Again, if geological cross sections were included we would have much more to say. We have ideas, but need data and facts, so we are holding off on many comments until we have a complete application and continue the review. BTW, the wetland survey approval for the site expired about 20 years ago and one will be needed (letter in file). These can only be done during the growing season, according to EGLE (Jerrod Sanders, EGLE WRD Director, personal communication).

I suggest you stop posting information from Levy under FAQs. These may not be vetted and can compromise our review. You are not appearing neutral, in my opinion. I was hired as an expert and you need to stop. If the mine is approved the residents may have reason to file suit or worse. That would not make Levy happy. I want to keep you out of trouble. Why, I don't know! HA! I do not appreciate your directing my review. I need to be impartial. I hung up on you on Monday because I believed your behavior was unprofessional, insulting to me as a geologist and threatening. Don't try to intimidate me..... It won't happen. Further outbursts could seriously impact our relationship. I'm forgiving to a point.

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