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April 3, 2026

Stephen R. Estey, Shareholder
ZAUSMER, P.C.
32255 Northwestern Highway, Suite 225
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Re: **Norvell Township – AAOM Conditional Use and Mining Permit Application**

Dear Mr. Estey:

As discussed during our telephone conversation on Wednesday, March 25, Norvell Township is seeking additional information to ensure that the administrative record is complete and that the Planning Commission can fully evaluate your client's application under the applicable ordinance standards and Michigan law.

The Township has received several written submissions from members of the public raising specific technical and environmental questions regarding the application, and we have collected those questions below. For several of the questions, we have maintained the original wording of the public's submissions and have indicated as such using quotation marks. Other submissions have been reworded for clarity. If you believe a topic is adequately covered in your original application materials, please direct us to where the information is located.

The information below does not include the analysis completed by GEI. We understand that your client already possesses GEI's reports and is in the process of preparing a response.

Questions from the Irish Hills Concerned Citizens:

1. Prairie Fen Proximity and Setbacks: "Correspondence in AAOM's application stated that no prairie fens were known to be in the near vicinity of the proposed mine. However, prairie fens are identified in the Michigan Natural Features Inventory materials included in Appendix A, including six occurrences within 1.5 miles of the project site. In addition, the 2017 MNFI report for Watkins Lake State Park identifies the Marsh Brook Prairie Fen Complex immediately adjacent to the project boundary, with mapped fen areas within approximately 100 feet of the proposed mining area. Given this documented proximity, will the site plan incorporate the required 1,600 foot setback for a "natural resource"?"

2. Groundwater Flow and Hydrologic Protection: "Prairie fens are vulnerable ecosystems that harbor high levels of biodiversity and provide potential habitat for numerous rare plant and animal species. They are sustained by specific cold, calcareous, groundwater-fed springs. Will AAOM provide site-specific hydro-geologic modeling demonstrating that mining activity will not alter groundwater quantity, temperature, mineral composition, or introduce contaminants in a manner that could affect the Marsh Brook Fen complex?"

3. Vibration and Ground-Disturbance Analysis: "Federally listed species, including the Eastern Massasauga Rattlesnake and Mitchell's Satyr butterfly, have been documented in adjacent park habitats, and state-listed species such as Henslow's Sparrow have been identified near the project site. Will AAOM provide a site-specific vibration and ground-disturbance propagation analysis showing the expected intensity and geographic extent of operational vibrations, including excavation, processing equipment, and projected truck traffic, beyond the property boundary? Please explain how those projections were evaluated to determine whether adjacent habitats supporting listed species would be adversely affected."

4. Traffic and Wildlife Mortality: "MNFI reports indicate that the project area is "rattlesnake country" and that road mortality is a primary threat to the Eastern Massasauga Rattlesnake. Will AAOM provide a quantitative study on the projected increase in wildlife roadkill resulting from adding 18 heavy trucks per hour to the local road network?"

5. Park Character and Public Interest: "Shortly after the park was established, the Jackson County Road Commission designated Arnold Road as a Natural Beauty Road to preserve its unique vegetation and scenery. Additionally, The Watkins Lake State Park General Management Plan, adopted in 2018, includes a specific 10-year action goal to explore the potential for establishing the park as a Dark Sky viewing location. What steps would AAOM take to protect these public recreation goals?"

Additional Concerns from the Irish Hills Concerned Citizens:

6. Impact of the Mine on the Park: "Watkins Lake State Park and County Preserve is a refuge for thousands of waterfowl and other birds, some of whom live there year-round and many more who travel through as they migrate. It is one of the most popular birding areas in the region, and a favorite place for hikers and families to enjoy a beautiful, quiet, remote experience in nature. Neither the application or the GEI report makes any attempt to determine the impact of the proposed mine on birds or other wildlife other than the small subset that may be threatened or endangered. Nor does it address in any way the impact of the mine on people who use the park or on the revenues and jobs such park use creates. They purportedly address potential water pollution to Watkins Lake and impacts on hydrogeology (more on that below), but those are only a fraction of the impacts on the park. Because the mine would flatten nearby hills and create dust, noise and night-time lighting, the other impacts to the park are likely to be significant."

7. Noise from the mine and the aggregate processing: "GEI raises significant questions about the mine's plan to lower noise to the levels allowed by the Township ordinance, and those need to be addressed. But GEI and the mining company are using the wrong measuring stick. The Township ordinance is the legal standard for everywhere in the township, but it does not address the special noise concerns of a state park that serves as a bird refuge. The mining company and GEI need to identify the noise level that would preserve bird migrations and nesting, and then explain how the mine would meet that noise level."

8. Dust from the facility: "GEI says that the facility needs to better describe its dust control plan and we agree. But again, even if all dust is maintained on site, what is the impact on birds, birders and park users? A 900-acre dust plume immediately abutting Watkins Lake is likely to have substantial impacts, even if it is kept within the 900 acres (which has yet to be demonstrated)."

9. Groundwater: "The application promised to keep at least 5 feet above the water table while mining and included summaries of data from boreholes drilled on the proposed mining site to establish that such mining would be possible given existing groundwater levels. GEI asked a number of questions about the groundwater data, and hydrogeologists we have consulted have additional questions. They would like to see the geological cross sections of the boreholes to determine whether there is perched groundwater above the estimated groundwater levels. And they would like to see a chemical analysis of the well water being used by the company in its processing. Because of previous agricultural use the well water could contain high levels of nitrates, and because of the bedrock that houses the well, it could also contain arsenic—either of which would make the water toxic and unlawful to use."

10. Surface water runoff: "The application stated that all process water and stormwater runoff would be infiltrated back into the soils on-site. GEI wanted more detail in the stormwater and process water plans, especially the closed loop system they plan to use, and the experts we consulted agree. They question whether the on-site soils will have the capacity to infiltrate all the process and stormwater on the site, which could lead to runoff into Watkins Lake or the need to construct a drainage pond."

11. Traffic: "The American Aggregates application proposes 18 gravel trucks an hour—9 full and 9 empty—for 10-13 hours a day, 5.5 days a week, for 20 years. The application identifies three potential haul routes, one of which would run several miles down a gravel road and all of which use Wampler's Lake Road and run through Hayes State Park. The application included a consultant's traffic study based on the analysis of traffic on Wampler's Lake Road and other area roads on February 13, 2023. The company's traffic study stated that traffic would be at a peak during that period and based nearly all its conclusions on the February 13 baseline study. Of course, everybody in the area knows that February 13, in the middle of winter, is one of the lowest volume traffic times of the year for these roads. This is a lake region, with populations and traffic that increase dramatically in the summer. The 4th of July week would be a far better measure of peak traffic conditions. In addition, the traffic study makes no projections on increased accidents, pedestrian safety or bike safety, especially on Wampler's Lake Road. Nor does it assess the increased traffic and impacts on Hayes State Park. Finally, it does not address in any way the increased road construction and maintenance costs that would ensue."

12. Property values: "The mining company's application included studies from three consultants—one in Michigan and two national—that concluded that there would be no impacts on property values near the mine site or along the haul route. All the studies based their conclusions on the same methodology: comparing the sale values of homes they classified as similar, some of which were near mines and some which were not. This methodology is flawed. It does not measure the easily observable and direct impacts on property values by looking at home prices before and after a mine was sited near them or along the haul route. Other studies have done so, including several in Michigan, but the application did not consider those studies. These other studies show 20 percent reductions in property values for residences near gravel mines and 5-10 percent reductions of property values up to 3 miles from gravel mines. Yet GEI approved of the mining company's studies without considering the Michigan studies or the flawed methodology of the mining company's studies."

13. Need for Gravel Mining: "The application measures the need for the gravel by assessing the gravel-producing capabilities of five facilities within a 20-mile radius of the proposed mine, and comparing those with needs of customers in locations including Romulus, Ann Arbor and Novi. Without further analysis, GEI approved of the application's conclusions. But many of the locations identified as customers are far beyond the 20-mile supply radius; they would receive aggregate from facilities the application never considered. For example, Romulus customers are far more likely to buy gravel from facilities closer to Romulus than the proposed mine, which is 50 miles from Romulus, but the application ignores those facilities. It likewise ignores the facilities closer to the Novi and Ann Arbor customers identified in the application. In fact, there are hundreds of gravel mines as close or closer to the Romulus, Novi and Ann Arbor customers identified in the application. EGLE's database identifies 119 sand and gravel operations in Washtenaw County, 101 in Livingston County, 26 in Wayne County, 232 in Oakland County, and 37 in Monroe County. The application fails to account for any of these facilities in estimating the market demand for gravel, and GEI never asked for them to be included in the analysis."

Summary of Concerns from Members of the Public

The following concerns are drawn from other submissions from the public:

14. Traffic Impacts, Haul Routes, and Highway 124: The proposed haul routes would reportedly place approximately 9 to 18 gravel trucks per hour on Highway 124 at US 12, resulting in truck traffic every three to four minutes during operating hours. This traffic would move through developed residential areas around Wampler's Lake and Mud Lake and directly through Hayes State Park, despite the availability of alternative highways. Highway 124 includes multiple speed limits, bridge crossings, and significant pedestrian, bicycle, and lake access traffic. An alternative haul route using more rural, non-residential roads has been suggested, but it has not been fully evaluated, even though it could reduce safety risks and avoid adding congestion at the US 12 intersection.

15. Adequacy of the Traffic Study: The traffic study concludes that no offsite improvements are required, but it relies on traffic counts collected in mid-February, when lake area traffic is at its lowest and mining operations are not active. The study does not reflect peak summer conditions, does not account for heavy boat and trailer driveway activity along Highway 124, and does not evaluate cumulative impacts from other nearby mining operations. It also fails to analyze stopping distances and visibility concerns for fully loaded gravel trucks repeatedly entering US 12, despite known braking limitations at highway speeds.

16. Truck Traffic Intensity, Emissions, and Public Safety: Depending on truck weight assumptions, the project could generate between 40,000 and 68,000 truck trips per year for 20 years, with trucks passing every two to three minutes during operating hours. Most of this traffic would travel on US 12. The resulting noise, diesel emissions, and dust would be substantial and persistent and could rise to the level of very serious consequences, particularly for nearby residents and park users.

17. Road Maintenance and Public Costs: The heavy truck traffic generated by the project is expected to impose substantial road maintenance and reconstruction costs that could exceed $160 million over time. By contrast, the proposed excavation surcharge of four cents per ton would generate only about $680,000 over twenty years, representing a small fraction of projected infrastructure costs. Neither the traffic study nor the consultant review evaluates road maintenance or repair impacts, despite the likelihood that the value of the extracted material could exceed one billion dollars. Without a meaningful mechanism to offset infrastructure damage, the financial burden would likely fall on the public.

18. Economic Benefits and Employment: The application suggests that the mine will benefit Norvell Township, but it does not clearly explain how or by how much. There is no supporting study showing the extent of any increase to the local tax base or how those benefits would be realized by Township residents. At the same time, the project appears to create only a small number of jobs, approximately six to eight positions total, several of which are reportedly already held by existing company employees. Given the scale and duration of the project, the claimed economic benefits appear limited and unsupported by detailed analysis.

19. Property Values and Net Fiscal Impact: The property value analyses relied upon either exclude lake properties or use out of state examples that do not reflect conditions in a developed lake region adjacent to a state park. Studies cited in the application understate the potential impact on lakefront home values, which could realistically decline by 10 to 15 percent. Without a credible, lake specific analysis, it is unclear whether any tax revenue gains would be offset by reduced residential property values.

20. Inconsistent Reserve Estimates and Production Assumptions: The application contains conflicting estimates of marketable sand and gravel reserves, with one section estimating approximately 12.5 million cubic yards or 17 million tons and another estimating approximately 7.7 million cubic yards or 10.4 million tons. At the same time, the traffic analysis assumes annual production levels that would result in more than 20 million tons over the project life. These discrepancies are not explained, yet the actual reserve amount affects project duration, traffic volumes, reclamation

timelines, environmental impacts, and transportation impacts. Without a clear and consistent reserve estimate, the project cannot be reliably evaluated.

21. Mining Near the Water Table: The application states that mining is not currently proposed below the water table, but it also acknowledges that the separation between excavation and groundwater is as little as five feet in some areas. Given that minimal separation, relatively small changes in excavation depth or equipment use could expose groundwater. The materials do not explain what conditions would trigger mining below the water table or how groundwater would be protected if that occurs, which is significant given the sensitivity of nearby water resources.

22. Groundwater Use and Dust Control: Dust control relies on extensive water spraying using groundwater drawn from existing agricultural irrigation wells. Only one well has a documented history of groundwater impact and it is located in the southern mining area, while most water use is expected in the north. The northern well was drilled shortly before the application was submitted and has no operating history. Because groundwater in this area flows from south to north and supplies Watkins Lake, nearby wetlands, rare fens, and potable wells, depletion or contamination could have serious consequences. The application does not clearly state how much water will be used, how groundwater levels will be monitored, or how dust control would function during freezing conditions or water shortages.

23. Air Quality Monitoring and Silica Exposure: The application states that fugitive dust will be controlled through daily observations and routine inspections, but it is unclear whether monitoring relies solely on visual assessment or whether trained observers and instrumentation will be used. There is no explanation of how opacity will be measured, whether alarms or automatic shutdowns would occur if limits are exceeded, or how carcinogenic respirable crystalline silica would be addressed. Weekly inspection schedules appear insufficient given continuous operations, raising concerns about whether air quality controls are adequate.

24. Noise Impacts: Noise studies relied upon by the applicant were conducted at a different mining site for a limited period of time and do not account for the closest residences to the proposed site. The studies appear to underestimate the combined noise from mining equipment and frequent heavy truck traffic. Given that agricultural equipment is already audible in the area, the addition of continuous industrial mining noise is likely to be significant, particularly for residents nearest the site.

25. Restoration and Long-Term Financial Risk: The application presents an optimistic vision of post mining restoration after 20 years but offers limited assurance that restoration will occur without risk to taxpayers. A performance bond alone may be insufficient to cover restoration costs in future dollars, particularly if mining operations cease prematurely. Past experience with unfinished restoration at other sites reinforces the need for stronger financial assurances and realistic cost estimates to ensure that restoration does not become a public responsibility.

26. Alternative Project Configuration: An alternative configuration has been suggested that would relocate processing facilities to the southern property, use conveyors to move material beneath Horning Road, and route truck traffic away from residential and lake areas. This approach could reduce reliance on public roads, eliminate mining traffic on several local roads, and confine impacts largely to private property. Despite these potential benefits, the alternative has not been fully evaluated.

We appreciate that this information may take some time to compile. If you require any clarification, please let me know. Thank you for your assistance with this matter.

Sincerely,

FOSTER SWIFT COLLINS & SMITH PC

/s/ Laura J. Genovich

Laura J. Genovich

cc: Norvell Township Supervisor

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