



December 29, 2022

Mark Popple
Pioneer Aggregates, Inc.
220 S. River Street
Plains, PA 18705

Re: Pioneer Aggregates, Inc.
Permit No. 101713
Fell Township, Lackawanna County

Mr. Popple,

On March 23, 2022, the Pennsylvania Department of Environmental Protection (“DEP” or “Department”) sent you a letter describing significant outstanding issues related to Pioneer Aggregates Inc.’s (“Pioneer”) demonstration project and Final Completion Report that led to the Department’s determination that the demonstration project was unsuccessful. The Department continues to determine the demonstration project unsuccessful for the following reasons:

- The applicable standards for the comparison of leachate data generated during the course of the demonstration project for purposes of justifying a statewide beneficial use general permit are the residential used aquifer Medium Specific Concentrations (MSC) in PADEP Statewide Health Standards, Groundwater Tables 1 and 2. While the Department understands Pioneer’s argument that the project site contains abandoned coal mine pits and that historic mining at the site has impacted the water quality at the site and the aquifer below the waste placement area is not currently in use, the aquifer still has the *potential* to be used as a private or public water source in the future. Additionally, as previously conveyed to Pioneer, Fell Township does not have any ordinances in effect that prohibit the use of the groundwater in this capacity. In accordance with 25 Pa. Code § 250.303(b) (relating to aquifer determination; current use and currently planned use of aquifer groundwater), “all groundwater in aquifers is presumed to be used or currently planned for use, unless determined otherwise by the Department under this section.” Additionally, as explained in the Department’s March 23, 2022, letter, the Environmental Hearing Board’s (“Board”) decision in *Citizen Advocates United to Safeguard the Environment, Inc. v. DEP*, 2007 EHB 632. (“*C.A.U.S.E.*”) stated that “a critical prerequisite to the beneficial use is that it will not result in any unpermitted surface water or ground water pollution. *Id.* at 690.” The Department reasserts that Pioneer is prohibited from discharging pollutants into the groundwater, regardless of whether the groundwater has been previously impacted by historic mining activities and maintains, especially for a demonstration project that aims to justify a statewide beneficial use permit, that the residential used aquifer standards are appropriate.

The leachate results, which show exceedances of residential used aquifer MSCs, and which were analyzed using laboratory method detection limits (MDLs) and/or

quantitation limits (QLs) above the residential used aquifer MSCs for many parameters, indicate the potential for groundwater degradation as the term is defined in 25. Pa Code § 271.1 (relating to definitions). Pioneer has stated on several occasions that Hawk Mtn Labs, Inc. has provided explanations for why samples yielded higher MDLs, but none of the explanations or responses from Hawk Mtn or Pioneer regarding the high MDLs have provided justification for how MDLs above the residential used aquifer standards, and in some cases, the nonuse aquifer standards, demonstrate that the leachate does not have the potential to pollute groundwater. With MDLs above the MSCs, the Department cannot make the determination that the leachate generated during the demonstration project did not contain constituents above the MSCs.

- Regarding the impact of background groundwater quality on leachate, the impact of stormwater on leachate, and the impact of background groundwater quality on stormwater, Pioneer failed to:
 - Adequately substantiate their claims that the constituents found in leachate, some of which exceeded residential used aquifer MSCs, were the result of background conditions at the site, and argued that comparing leachate data from the placement area and groundwater data is “improper.” Comparing leachate results generated during the demonstration project to groundwater data is essential for assessing whether the leachate has the potential to further pollute the groundwater based upon the difference in constituent levels in the leachate and groundwater.
 - Adequately respond to the Department’s findings that the leachate generated during the demonstration project contained constituents that were not detected in the stormwater samples, the leachate generated during the demonstration project contained constituents at higher concentrations than the stormwater samples, and that the presence of certain constituents in stormwater samples indicated that the stormwater was contacting the waste placement area. Pioneer argued that comparing the leachate data to stormwater data is “improper,” while also asserting that the stormwater generated during the demonstration project infiltrated the leachate vault. The leachate data was compared to the stormwater data to assess whether the liquid in the leachate vault was analytically different than the stormwater.
 - Adequately explain how stormwater data, which contained constituents that were also found in the construction and demolition fines, could contain these constituents if the stormwater did not contact the waste placement area. The Department also reiterates that the stormwater diversion channel was partially used to divert stormwater around the waste placement area from stormwater run-on, but the design was primarily intended to collect stormwater sheet-flow runoff from the waste placement area, which is substantiated by the constituents detected in the stormwater samples.
- The Department reiterates that regardless of whether the Department’s Bureau of Mining Programs would actively permit mine reclamation in situations where the mine is an abandoned coal pit that predated the regulations under Act No. 147 of 1971, because the intended outcome of the demonstration was to show that the waste material is suitable for

- use as a mine reclamation material, it is implicit that the material meets mine reclamation standards. This is true regardless of whether the permit references the mine reclamation standards. The Department's Mining Program stated that Pioneer's waste material would not be allowed for placement above or below groundwater in conjunction with a mining permit approve for mine reclamation fill. This determination was based on the varying amounts of constituents (dirt, dust, crushed rock, stone, and brick) in the C&D fines, and exceedances of the mine reclamation fill concentration limits for lead that are observed in 17 of Pioneer's leachate samples, and exceedances for mercury that are observed in two of Pioneer's leachate samples.

On December 19, 2022, the Department received a submission on behalf of Pioneer which provided a proposed work plan that would involve additional sampling and analysis to address the Department's outstanding concerns related to the project. As described in the plan, 8 randomly spaced core samples at varying depths within the in-place fill material would be collected and analyzed for the parameters required in the demonstration permit. The results of the analysis, however, are proposed to be compared to the non-use, non-residential aquifer standards, which the Department has repeatedly stated are not the correct standards for evaluating whether the demonstration project was a success. Based upon this fundamental disagreement between the Department and Pioneer, the Department has determined that the work plan would not generate data that would result in a different determination regarding the project's success by the Department.

The Department maintains that the potential for groundwater degradation due to the quality of the leachate generated during the project; the precedent set forth in the *C.A.U.S.E.* matter; and the Department's Mining Program's determination that the material would not be authorized for use as a mine reclamation material; all substantiate the Department's determination that the Pioneer Demonstration Project was unsuccessful.

Sincerely,



Roger Bellas, Environmental Program Manager
Bureau of Waste Management
Northeast Regional Office



Chris Solloway, Environmental Program Manager
Division of Municipal and Residual Waste
Bureau of Waste Management
Central Office

cc: Fell Township Board of Supervisors