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June 6, 2024

Ms. Tiffany Folk, P.G.
Pennsylvania Department of Environmental Protection
District Mining Operations
5 West Laurel Boulevard
Pottsville, PA 17901-2522

Re: Pierson Rheems LLC
Rheems Quarry
SMP #36080301
Major Modification
West Donegal and Mt. Joy Township's,
Lancaster County, PA

Dear Ms. Folk:

Akens Engineering Associates, Inc. has reviewed and provides the following responses to the PADEP Technical Deficiency letter dated April 12, 2024:

1. The enclosed comments from Richard Tallman, P.E. must be addressed.

    1. Please review the entire Erosion and Sedimentation plan and how it integrates with the planned expansion. 25 PA Code, §77.458.

    We have expanded the Erosion and Sedimentation plan to discuss in detail the staging along with how it integrates with the existing facilities.

    2. Please review the surface drainage patterns and address the runoff from the Support Area around the scale and stockpile areas that make its way to the UNT to Donegal Creek. Include this in the revised/updated E & S plan. Please show the E & S BMP's on the Module 9 Operations Map. 25 PA Code, §77.458.

    We have added labels showing the existing concrete jersey barrier/stone berm along the east edge of the operation. We have added proposed stone berm to prevent any untreated runoff from entering the UNT where there was no BMP's.

    3. Please show (on the Module 9 – Operations Map) the locations where the overburden that will be stripped from the expansion area will be placed. 25 PA Code, §77.452

    The overburden material is shown to be stockpiled along the exterior boundary of the 30-acre expansion area. The storage area is shown on the Module 9 Operations Map and the cross-section sheet.

a. Per the Part B Special Conditions - A minimum horizontal distance of 15 feet (4.6 m) shall be maintained between the outside toe of any berms and the permit boundary, in order to provide access to these sections of the berm. 25 PA Code, §77.458.

The outside edge of the overburden storage is 50 feet from the SMP and property line. There is a municipal required six feet high buffer berm which is 25 feet from the SMP and property line. We have added dimensions to the plan view of the Module 9 Operations Map and the cross sections.

b. Per the Part B Special Conditions - Prior to the stripping of topsoil or overburden in the preparation of any new or additional areas within the present permit area to be quarried, the permittee shall provide adequate diversion ditches (or berms) to contain all runoff on-site and/or direct it to the pit sump. 25 PA Code, §77.458.

The current area that is bonded is already completely stripped of topsoil and overburden. We have provided a drainage area map showing the existing drainage patterns which currently flow into the pit for the existing quarry area and the proposed expansion area.

4. Please provide the Erosion and Sedimentation Plan for the planned overburden stockpile(s). 25 PA Code, §77.458

We have expanded the Erosion and Sedimentation Pollution Control Plan with specific details for the overburden stockpiles.

5. Please provide a plan to clear the woody vegetation growing in the berm of Pond 2. 25 PA Code, §77.458

Vegetation in the berm of pond 2 has been removed.

6. Please provide a plan to maintain access to NPDES Outfall 002. 25 PA Code, §77.458

Access for the NPDES 2 is currently being created by clearing vegetation from the berm of pond 3.

7. Please provide a plan to clear the woody vegetation growing in the berm of Pond 3. 25 PA Code, §77.458

Vegetation is currently being removed from pond 3.

8. Please provide an Erosion and Sedimentation Plan for the permit area occupied by Delaware Valley Concrete. 25 PA Code, §77.458
   a. Please provide a pond certification or justify an exemption for the catch basin near the entrance. 25 PA Code, §77.458

We have attached the pond certification for the catch basin near the entrance.

b. Please provide a pond certification or justify an exemption for the infiltration basins up by the reject concrete processing area at Delaware valley Concrete.

We are requesting an exemption for certification of the infiltration bed. The justification for the request is due to where the infiltration occurs into the old pit which is completely mined into the existing ground. The water surface elevation of the old pit was 405.00 msl. The pit was filled in completely and the current existing ground where the water is pumped to is at elevation 425 msl providing approximately 20 feet of subsurface storage and infiltration.

c. Per the Part B Special Conditions - The amount of clean waste concrete to be to be stockpiled on-site shall not exceed 10,000 tons at any time. Also, the amount of processed, crushed concrete stockpiled on-site shall not exceed 10,000 tons at any time. The permittee shall maintain monthly records on the amounts of waste and processed concrete stockpiled on-site. Please review quantities of waste concrete stored on site. 25 PA Code, §77.205

Volumes of waste concrete and processed concrete shall be maintained and updated on a monthly basis. We have provided current volumes on the operations map. Unprocessed concrete storage is 8650 CY. Processed Concrete storage is 1850 CY.

d. Please include the discharges/infiltration points from the Delaware Valley Concrete operation in a revised NPDES permit. 25 PA Code, §77.526.

An additional NPDES point will be requested as part of the NPDES renewal process. Revised pages have been submitted to the PADEP. We will run a new Public Notice including the additional point. A draft notice is attached for review.

2. The enclosed comments from Jeff Painter, P.G. from Pennsylvania Game Commission must be addressed.

Module 23

We have revised Module 23 as per the below responses.

Permanent Cover
Because of its ability to out-compete other grass species and/or non-native nature, and because there are higher value wildlife habitat grasses we recommend either minimizing the use of rye/ryegrass species, redtop, and orchard grass, or eliminating and replacing with a combination of oats (spring) and/or wheat (fall), along with crimson, red and/or white clover.

We have revised the seeding schedule to an ERNMX-181 Native Steep Slope Mix w/ Annual Ryegrass or equivalent. While this mix still has ryegrass it is minimized to 20 percent with the majority seed being 29% Big Bluestem, 'Southlow'-MI Ecotype , 15% Indiangrass, PA Ecotype, and 13.45% Virginia Wildrye, Madison-NY Ecotype.

Studies have shown fescue *(Fetuca sp.)* to be toxic to several wildlife species. In addition, because of its ability to out-compete other grass species, it could create a sterile fescue environment. Therefore, we recommend either eliminating or replacing the fescue species with a combination of big and little bluestem (Andropogon gerardi and Andropogon virginicus, respectively), indiangrass (Sorghastrum nutans) and switchgrass (Panicum virgatum).

We have eliminated fescue from the seed mix.

Woody Plants
European Alder is a non-native, Department of Conservation and Natural Resources -listed invasive species and should not be used.

We have removed the European Alder from the planting schedule.

The revegetation plan includes unspecified oak, maple, and ash species. We recommend not planting silver maple, a low habitat value species.

Woody plant Mixture "C" is a default schedule listed on Module 23 and was not actually specified anywhere in the project. We have deleted this schedule for clarity.

We recommend not planting any ash species for survival is unlikely due to the widespread presence of the invasive emerald ash borer.

See above response.

3. The enclosed comment letters and public hearing comments from stakeholders must be addressed.

We addressed comments provided to us by the PADEP in detail below.

4. The General Information Form requires the following corrections:

We have attached revised pages 2, 3, and 6.

a. In the Facility Information section question 2 is check no for an addition to an existing facility. Clarify why the expansion is not considered an addition to the mining and NPDES permit.

We have revised the response to question 2 to indicate the project will include an addition to an existing facility, system, or activity.

b. In the Facility Information section "blasting operation" is not checked. If blasting will occur in proposed area, please check yes.

We have revised the response to include the blasting operation as checked.

c. In the Project Information section question 1, is checked no for informing the surrounding community. Verify the operator did not inform the surrounding community of the expansion.

At the time the form was completed, the public notice had not yet been completed. We have revised the answer to this question since the public notice was completed and a public hearing has been conducted. We have provided verbal responses to most of the of the community's concerns. This revision includes written responses to comments provided during the public notice and hearing process.

d. Please list all operations that produce air emissions in question 13 on page 6 of 7.

Air quality permits at this site are as follows:

No changes are proposed to the existing permits.
Allied Concrete
GP-3 Portable Nonmetallic Mineral Processing Plant
GP-9 Diesel or No.2 Fuel-Fired IC Engines
Pierson Minor Source 36-05126 includes Pennsy Supply HMA, Aggregate Storage and Handling, Baghouse, Knock-Out Cyclone
36-05153 GP-3Aggregate Processing Plant, Parts Washer, Wet Suppression, Godwin Deisel Pump

5. Exhibit 5.1 Property Owners Map list the tax parcels to identify the properties. The Module 5 exhibit for 5.2 Contiguous Area and 5.3 Adjacent Area are listed by number. The Exhibit 5 map numbers should match the numbers listed in the Module 5.2 and 5.3.

Please remove/delete the portion of the 5.2 Module which contains the names listed by numbers. We have included the list which is identified by the tax parcel ID's and is how they are referenced on the maps.

6. The Delaware Valley Concrete Facility is located within the permit boundary. The concrete facility must meet all mining regulations. During a field review the following concerns were found:

a. Concrete plant and surrounding areas must be bonded for reclamation.

The concrete plant and surrounding areas are bonded for support activities. We have added additional amounts for the plant removal and waste concrete piles.

b. All permit for the concrete plant must be incorporated into the mining permit.

We have added an NPDES Discharge point for the Concrete Plant. The Concrete Plant has existing air quality permits. The processed and waste concrete storage amounts are listed in the permit and monitoring requirements as specified in the 2010 modification.

c. The concrete area contained a stockpile of waste concrete. The volume of waste concrete stored on the site must be submitted to the Department. This waste concrete must be bonded for removal.

The volume of unprocessed waste concrete stored onsite is 8,650 CY. The volume of processed waste concrete is 1,850 CY and a total of 10,500 CY has been added to the bonding calculations.

d. The air quality permit for the concrete plant must be incorporated into the mining permit.

All Air quality permits are listed above in 4.d.

e. All E&S controls on the concrete area must be the standards of the mining operation. The E&S controls must be submitted to the Department for this area.

We have provided an Erosion & Sedimentation Pollution Control Plan which addresses the concrete plant area.

7. An asphalt plant is located within the permit boundary. The asphalt plant activities and permits must be incorporated into the mining permit.

The asphalt is already incorporated into the mine permit. The plant has air quality permits. The Asphalt plant has RAP storage locations and volumes listed in the permit.

8. The Exhibit 6.2 Environmental Resources map must contain the following information:

   a. Strata strike and dip or structures found in the quarry

We have added measured strike and dips to mapping.

   b. Geologic faults must be shown if known

There is one mapped fault in the area northeast of the concrete plant and is shown on the 6.2.

   c. Direction of groundwater flow (local and regional)

We have added local and regional groundwater contours to the 6.2. The local contours generally are in the area of the zone of influence drawdown contours directed to the pit sump.

   d. All sinkhole features found in the highwall

There is one sinkhole feature in the west highwall is shown on the 6.2.

   e. The sinkhole(s) the quarry was found to contributed to in the village of Rheems

The sinkholes listed in the Moore sinkhole report are shown on the 6.2.

   f. The 300 setback for occupied structures should be shown as a different pattern such as cross hatching rather than stars.

We have revised the hatching for the 300' setbacks from occupied structures.

9. All map exhibits (ex. 6.2, 9, 18) must be liable. Please submit a set of map exhibits without the aerial map shown as a layer.

The aerial photo has been removed from the maps.

10. During a field review of the site, two (2) inflows and one (1) seep were noticed in the quarry. The inflows/seep must be shown on the map and monitored for volume, turbidity, dissolved solids, and temperature. Clarify if the inflows were found along strike or cross strike.

We have reviewed the inflows into the quarry. They are shown on the 6.2 Environmental Resources, including estimated elevations and flows. The locations of the two inflows are in areas where it is not safe to sample. The seep is at such a low rate it is not possible to accurately sample.

11. The Module 8 states water supplies will be replaced within the zone of influence. Explain when the replacement/deepening of the well will occur and the current condition of the wells.

The Module 8 specifies the three houses along Bossler Road (336, 420, and 430) may be impacted due to dewatering. We have already deepened two of the houses (336 and 430) and upon investigation of the middle property (420) we have determined the existing well to be of sufficient depth and should not need deepened or replaced. The Sweigart parcel (191 Bossler Rd) has a farm and house located on it which potentially could be impacted. We have requested via direct contact with Mr. Sweigart to gather information on the wells and he declined. We shall provide a written correspondence to Mr. Sweigert discussing the potential impacts of the quarry and the proposed remedies for those impacts. Until we know the depths of these wells and static water levels we cannot determine a time frame for potential deepening.

12. The Background Water Quality Data must be legible. Submit the information in a legible font size.

We have revised the background water quality data printouts for Monitoring Wells A, B, C, And D.

13. Address the following comment on the groundwater model:

    a. The quarry is approved for a maximum discharge rate of 2.8 MGD. The groundwater module shows a maximum discharge rate of 2.1 MGD at maximum depth and lateral extent. Clarify if the approved maximum discharge rate of 2.8 MGD will change the zone of influence of the quarry.

The model does not account for stormwater. The Model is also based on typical conditions. The NPDES volume needs to be on the higher end of the predicted rate or we will be over every time we have a higher precipitation period. For instance, the first two weeks of April 2024 having the fifth highest recorded precipitation.

    b. Table 2-1 Hydraulic Conductivity Zones in the Calibration Model does not show the hydraulic conductivity for zone 10. Revise the document to add zone 10.

We have added Zone 10 to the table.

    c. Clarify why on Figure 2-2 the two streams adjacent to the quarry are not shown along the permit boundary.

Figure 2-2 shows only boundary conditions. The creeks are not considered a boundary condition for our model. Those creeks are above the water table and only provide limited recharge to the aquifer. Removing them from the model makes impact predictions more conservative as this minor source of recharge is not simulated.

    d. Figure 4-1 shows the zone of influence with a pit floor at 126 feet MSL. Please verify the drawn down contours match the contours shown on the Exhibit 6.2: Environmental Resources Map. Explain why there is a difference between the two maps.

We have revised the drawdown map to reflect the predicted levels and the 4-1 and 6.2 which now match. We have also increased the scale to show the entire area of predicted impacts.

e. Please note the zone of influence map does not include mining the area between PW-2 and the active quarry area. The groundwater model will need to be rerun with this area included before it can be approved for mineral extraction.

This section is not bonded for mining. If in the future if we do bond it, we will revise the model.

f. Explain the 50 foot and 25 foot drawn down contours at final build appear to show the pit underwater.

The drawdown contours shown on the ZOI maps are not groundwater contours at mean sea level. The levels shown on the ZOI maps reflect how far down the water table is drawn down.

g. Clarify if the groundwater model use fix head as part of the evaluation.

No, there are no fixed heads in the simulations.

14. Question 10.2 must be answered for the entire permit area with the proposed expansion area not just the proposed expansion area.

We have revised the Module 10 Operational Module to include existing and proposed areas.

15. Provide an alternative to water for dust suppression on road in question 17.2(b). The quarry will most likely not use water for dust suppression in freezing weather conditions.

Your statement is correct; when the temperature gets too cold the quarry will not operate since the processing equipment requires spray nozzles to function for dust suppression on the crusher.

16. Question 19.3 must be answered.

We have checked the box to indicate there is no endangered species or habitat in the project area.

17. Question 19.1(c) must be answered to address if alternative to affected Prime Farmland were considered and not considered feasible.

We have provided an expanded discussion regarding an alternative to impacting prime farmland.

18. Clarify how prime farmland soils will be utilized or stockpiled on the quarry.

The new area to be stripped is approximately 18 acres. Removing the top 2 feet of this area and storing it in a pile requires 29,040 CY. We have labeled a storage area with storage for the Prime Agricultural soils on the maps. This material will be used at final reclamation to establish a planting medium on top of overburden area.

19. The reclamation narrative states overburden will be used to reclaim the highwalls. Submit the current volume of overburden on the site.

The existing overburden on the site is 281,830 CY. The overburden to be removed from expansion area 580,800 CY. The total available overburden on the site is 862,630 CY. 862,630 CY – 25,300 CY TWP Berm – 837,330 CY of overburden remain for reclamation. The required backfill material is 327,565 CY.

20. Cross sections B-B' and C-C' shows highwalls being reclaim by removing portion of bench to achieve a 35-degree slope. The permit is not bonded for blasting highwalls for reclamation. Explain how this section of highwall will be reclaimed.

We have revised the reclamation slopes along the west wall to be backfill. We have added 726 lineal feet of highwall reduction to the bond calculations to include portions of the existing east highwall.

21. The overburden piles locations with volumes must be shown on the map exhibits.

All overburden piles with volumes are shown on the maps.

22. The bonded area for support must be shown as a different color rather than green on an aerial map.

We have revised the color of the support activities. We have removed the aerial image from the maps as requested.

23. A separate bonding map must be submitted showing the bonded mining and support area, highwalls bonded for reclamation by backfilling, overburden stockpile locations and volumes, and area of pit that will be underwater.

We have added a bonding and reclamation map with the requested information.

Below is our response to the comments submitted as part of the public participation portion of the application process.

Patricia J. Longenecker comments – We appreciate Ms. Longeneckers concern for good air quality. Large Noncoal Mining operations are thoroughly regulated. The proposed expansion is not requesting any new air quality permits. Module 17 addresses how the expansion meets the regulations developed to protect the environment. The proposed expansion will use the existing processing equipment already permitted and operating.

[1]Natural aggregates—crushed stone and sand and gravel—are used for residential, commercial, and public works projects, as well in agriculture and chemical processes. Limestone is used in everything from building roads and houses to agricultural lime and kitty litter to high purity products used in chemical processes. Congress considers limestone to be a national security commodity. Pennsylvania consistently ranks in the top three in the nation for production of crushed stone and in the top six of the nation in sand and gravel. The industry's top customers in Pennsylvania are PennDOT, the Pennsylvania Turnpike Commission and municipal governments.

The aggregates industry is the foundation of the country's infrastructure and is a significant contributor to the economic well-being of Lancaster County. In Lancaster County, many of the quarries are generational businesses and have been in operation since the early 1900s providing sustainable jobs with above average salaries and benefits.

[1]June 29, 2018 Correspondence places2040, Pennsylvania Aggregates and Concrete Association
The extraction of minerals is a basic and essential activity to making an important contribution to the economic well-being and prosperity of Lancaster County, the Commonwealth of Pennsylvania, and the nation. Quarries, unlike other industries, cannot pick and choose where they operate. They are driven by the location and quality of the stone in the ground. Lancaster County has one of the most robust limestone areas in the state. To ensure a

continued, steady, adequate, and economic supply of the raw materials needed by Lancaster County, it is important that mineral resources are not sterilized by new, nonmineral related development.

Comments from Roger Greenwalt

Mr. Greenwalt, in his own words, recognizes the expansion area to the west will have little effect on his property that is located east of the existing operation. His biggest concern appears to be him paying for a sinkhole repair on his property. We cannot really offer a scientific opinion based on the comments. The report by the Geologist supervising the repair could provide valuable background data. The quarry does pump groundwater to be able to operate. We prepared a model showing predicted impacts on local groundwater system. The previous permits all went through the same processes of public notices and permitting. Blasting has very specific regulations, monitoring and reporting requirements. They have not had a blasting violation at this site under Pierson's ownership. The dust is also regulated by Federal and state laws which are permitted and inspected by the PADEP.

Comments from Stephen M. Cobaugh

The quarry has been in operation since the 1950's. The area is an industrial area with multiple industrial activities. The number of blasts in 2022 was between 25 and 30. Blasting is a highly regulated and permitted activity. The current owner is in compliance with all blasting regulations at this operation.

Comments from Don & Marilyn Miller

We met with the Millers. The Millers have a private well for water supply, for drinking water, and for geothermal heating. They have two wells: the pump well is reported as 325 feet deep, 74 feet of casing, 25 GPM and the dump well is 351 feet deep, 91 feet of casing, and 60 GPM. We measured a water level of 122.5 feet from the dump well which was active at the time of measurement. We have sampled the well and have updated module 8.1a. The buffer screening for the expansion shall be provided in accordance with zoning ordinances.

Comments from Neighbors Against Rheems Quarry Expansion (NARQE)

Responses to each NARQE comments are provided below:

Comment 1: The public hearing shall be held in accordance with Chapter 77 provisions as required.

Comment 2: The statement regarding the 1000-foot boundary is incorrect. We are in Pennsylvania and therefore, shall prepare the permit in accordance with Pennsylvania regulations which also provide the law on permitting quarries. The investigation has been conducted based on the existing and proposed conditions at the site.

Comment 3: We have not provided private information regarding adjoiners as part of the public notice. We contacted all adjoiners within 1,000 feet and within the zone of influence and if granted permission conducted tests on their private wells. The PADEP has been provided with this information. The public notice is not required to be on display at the West Donegal Township Building. However, at the request of the township we have provided a copy for them to make available to the public.

Comment 4: Pierson is in compliance with all permits within the Commonwealth of Pennsylvania.

Comment 5: It appears as if commentator did not fully read or understand the information submitted as there was significant new information generated specifically in the west and south. Information from the previous permit was used as it is valuable in understanding and predicting the effects of the expansion. The geology has not changed since the previous permit. To list a few new items the commentators missed; four additional monitoring wells were drilled now making a total of 7 monitoring wells surrounding the quarry. We installed pressure transducers in all monitoring wells which allow us to collect data continuously and graph this against the rainfall giving us a detailed understanding showing seasonal variations and impacts the pumping may have on the surrounding aquifer. We have prepared a 3-dimensional groundwater model analyzing and graphically showing the predicted impacts. We have prepared a karst permitting supplement and sinkhole mitigation plan.

Comment 6: The volume of overburden located on the Sweigart parcel is the foremost rational for moving west.

Comment 7: BM-7 is located within the drainage area however it does not receive quarry discharge and is not proposed to receive quarry discharge. We have photographs of upstream and downstream locations showing the dry conditions. Also, it is piped as shown on the mapping and as stated in our reports. We are not aware of a rational to falsify data or what evidence they have to suggest this.

Comment 8: NARQE acknowledges that PFAS are not pollutants generated by the quarry, but expressed concerns about PFAS it detected in surface water (on non-quarry property) potentially migrating to deep private groundwater wells. NARQE's concerns and sampling results are speculative because, currently, there is no applicable PFAS limit for surface waters or maximum contaminant level (MCL) for private homeowner wells, and no PFAS detected in the groundwater sampled. The newly enacted Federal rule (April 2024) and the Pennsylvania rule enacted on January 13, 2023 (25 PA. CODE CH. 109), apply to drinking water standards for public water systems (PWSs); monitoring requirements under the rule are applicable to community water systems (CWSs), non-transient noncommunity water systems (NTNCWS), and bottled, vended, retail, and bulk systems (BVRBs). The quarry or the surface water is none of these entities. With no applicable standards, NARQE's sampling results in surface water have no meaningful basis for comparison. The Pennsylvania drinking water rule also states that monitoring would be required for 4 consecutive water quarters, and agencies have warned that PFAS sampling has a high risk for cross-contamination during sampling. NARQE's sampling was only one event that was not validated.

For purposes of this comment and response, assuming PFAS were validly detected as presented by NARQE, the characteristics of the surface water, groundwater and well locations, and the site all indicate there will be no impact. To be responsive to NARQE's comments, we evaluated NARQE's results, the approximate sampling locations, the stream drainage area, and the locations of the private wells, along with the modeling and information submitted for the quarry expansion. NARQE commented that Ms. Meredith Glazier sampled a surface water location identified as ST-1 and detected two types of PFAS (19 ppt for PFOS and 3.2 ppt for PFOA). The surface water is not on the quarry property. It runs through the Wolgemuth Property (through Property ID Nos. 160-2294919-290441-0-0000 and 160-2295271-289140-0-0000) to the west of the quarry expansion (north to south). The ST-1 sampling location is not mapped by NARQE to Pierson's knowledge but was described as located where the surface water is daylighted when it reaches Bossler Road (the southernmost boundary of the Wolgemuth Property along Bossler Road).

The crux of Comment 8 is speculation that the quarry expansion would somehow cause the surface water (and PFAS) in this ST-1 location to reach private groundwater wells. The test results submitted by the commentors show no PFAS in the one well tested. No PFAS have been detected in groundwater wells to Pierson's knowledge. There is no reason to expect that any existing PFAS levels in this surface water would increase or migrate. Both Pierson and NARQE agree that Pierson is not the source of any PFAS detected, and that Pierson does not discharge into this surface water to the west of the quarry expansion. Likewise, NARQE has not identified any PFAS source. NARQE admits that the quarry is not the source of PFAS but contends that the source of PFAS should be investigated with extensive sampling and delineation. But NARQE's own results indicate the stream west of the quarry at ST-1 as having 19 ng/L PFOS and ST-2 which is at the stream where the quarry discharges as 4.3 ng/L PFOS. The data supplied by the commentors thus indicates the quarry is not increasing or pulling additional PFAS across sub-watershed boundaries.

The commentator's concerns can also be alleviated by the lack of pathways between the surface water and groundwater and, ultimately the private wells. In Module 8 of Pierson's application, Pierson described this surface water as being enclosed in pipe: "The mapped stream located to the west of the 30-acre expansion area (BM-3 Upstream & BM-7 Downstream) has been modified and has been completely enclosed in 10" PVC pipe along its course between Heisey Quarry Road and Bossler Road." As NARQE acknowledged, when it is flowing, the surface water is completely enclosed in 10" PVC pipe along its course between Heisey Quarry Road and Bossler Road. In other words, the surface water is piped completely beyond the project location. This surface water is mapped in Module 6.2, which is part of the permit application.

We have also expanded the Hydro Report and Module 8 to discuss in detail the limited upgradient drainage area to the ST-1 location, which corresponds to the de minimis (or lack of) surface flow we observed. In addition to being piped beyond the project area, the de minimis flow further supports the conclusion that the quarry will not have any impact for background PFAS. See Module 8, Section 8.4, and the Hydro Report at pages 8-9.

Overall, NARQE's PFAS testing does not change the analysis for purposes of the application, and groundwater will not be impacted, for several reasons. First, the quarry expansion will not physically disturb this surface water. The quarry does not currently discharge to this surface water and does not propose to discharge to this surface water.

Second, NARQE's comment appears to focus on the zone of influence, but the expansion will be incapable of drawing the surface water into the existing private wells. There are no wells between the proposed expansion and the surface water encased in PVC pipe. The surface water typically has minimal flow that is mainly supplied by the upgradient pond, which is the headwaters of the unnamed tributary. We have included photographs of Monitoring Points 3 and 7 as Appendix A of the "Pierson Rheems LLC, Rheems Quarry, 30 Acre Expansion, Hydrogeologic Study" showing the surface water was dry and therefore was not tested for background water quality data. The pond that is the headwater of this stream is proof that the surface water is not connected to the deeper aquifer system, or the pond would not exist.

NARQE has acknowledged that PFAS in surface water is ubiquitous, including in Lancaster County, but was not detected in the well sampled. If PADEP were to prohibit or restrict development simply because nearby surface waters contain PFAS, it would be an arbitrary exercise that would stunt development and use of natural resources. Development and permits cannot simply cease because there is PFAS nearby. In any event, despite extensive analysis, Pierson is unaware of any pathways from the surface water to groundwater wells.

There is no comment 9.

Comment 10: Both Pierson and NARQE agree that Pierson is not the source of any PFAS detected in nearby surface waters. NARQE nonetheless speculates about potential sources of PFAS in nearby surface waters and argues that PFAS should be regulated in Pierson's NPDES permit based on a nonbinding and inapplicable U.S. EPA guidance document titled "Addressing PFAS Discharge in EPA-Issued NPDES Permits and Expectations Where EPA in the Pretreatment Control Authority." This guidance document is not applicable, including because surface mines are not among the categories of dischargers that are known or suspected to discharge PFAS. As NARQE has acknowledged, PFAS in surface water is ubiquitous, including in Lancaster County. If PADEP were to prohibit or restrict development or require NPDES conditions simply because nearby surface waters contain PFAS, it would be an arbitrary exercise and slippery slope. That type of broad policy decision would set a dangerous precedent in which essentially every water user would be regulated. Such a far-reaching policy decision should not be made in the context of a single permit application.

In any event, there is no in-stream or discharge standard for PFAS, so there is nothing to compare or limit for purposes of NPDES permit conditions. The water standards for PFAS apply to *drinking water*. The PFOA result in-stream after Pierson's discharge (4.3 ppt) is also less than the result at ST-1 (19 ppt). Simply, NARQE has not presented any legal or factual information to support that Pierson's mine contributes to PFAS in surface waters or that the NPDES discharge should be regulated for PFAS.

Comment 11: CAFO's are regulated and permitted activity in Pennsylvania.

Comment 12: The sinkhole mitigation plan states "In the event of an active sinkhole located within the zone of influence (a noticeable surface depression caused by the collapse of soil or rock material below it, where, due to its particular location, directly threatens public health or safety, a private dwelling, structure or the environment) the Quarry shall take action to repair it, unless it can be shown that the sinkhole(s) is/are related to some other factor, a man-made feature or activity, or significant overlap of the hydrologic zones of influence of adjacent water withdrawal sources." The zone of influence has been determined using the 3-dimensional model to predict impacts the quarry will have on the water table.

Comment 13: We can add any additional verifiable data to mapping.

Comment 14: Our study was not completed until after the Tomesetti well was replaced.

Comment 15: Surface depressions from the PAGEODE are all shown on the environmental resources map. We also provided aerial mapping ranging from 1940 through 2015 which was viewed digitally in detail to assist in identifying sinkholes. The current aerial mapping shows the details directly around the quarry from 2020 and outside that the 2018 flight shows the remaining area all of which were used identifying sinkholes.

Nowhere in the application does it reference the 1000' boundary as limit on analysis. We are located in Pennsylvania and have submitted the permit under Title 25 Chapter 77 of the Pennsylvania Code.

Comment 16: Pierson is not in violation of any Pennsylvania environmental statues. Pre-Blast surveys shall be conducted in accordance with the current blasting regulations.

Comment 17: We have submitted Module 17 discussing the air quality measure to be employed at the site.

Comment 18: The Eppler formation does not contain naturally occurring asbestos.

Comment 19: Module 17 addresses the proposed expansions noise levels. There will be no difference from the current levels.

Comment 20: We did not complete any studies prior to Tomesetti's well going dry which was addressed immediately. We met with residences located in the zone of influence along Bossler Road. Our report and wells clearly predict the impact. The monitoring plan requires monthly monitoring which is reported to the PADEP on a quarterly basis. Monitoring well data, pumping data, and 3-dimensional groundwater model all provide data and anticipated impacts on surrounding wells. The continual reference to 1,000 foot boundary for background monitoring which gathers general characteristics of the hydrogeologic regime is the beginning point of reference and at no point was it the final limit on studies conducted or regulatory authority of the PADEP. It's just a beginning point. The quarry referenced by the Foose case is currently a backup water supply for the PA American Water Company.

Comment 21: The geologic report does not state the geology is unknowable. Nor do we think a well in Wolgelmuth's front yard is adequate to determine the geology. However, we do think 7 monitoring wells, 32 acres of open quarry which occurred over 83 years, years of published data and 27 soils borings all provide significant knowledge to determine the site geology. Including two separate studies by some of the world's foremost geologists. Donald Wise, F&M College as published in the Pennsylvania Academy of Science and Roger T. Faill and Alan R. Geyer as published in the GSA Centennial Field Guide – Northeastern Section 1987.

Comment 22: Our evaluation considered several factors and extensive information, not just the presence or integrity of the PVC pipe. See Response to Comment 8.

Comment 23: The PADEP issues permits in accordance with Title 25 Chapter 77 which does allow for impacts to be mitigated.

Comment 24: The permit addresses the prime farmlands which is also consistent with Lancaster County's Comprehensive Plan "Places2040". The commentor should consider Minerals in same light as prime agg farmland as both are critically important natural resources.

Comment 25: The data analyzed as part of the permit application as previously stated are 7 monitoring wells, 32 acres of open quarry which occurred over 83 years, years of published data and 27 soils borings. The data supports the studies and reports for the permit application.

Comment 26: No properties were taken for the proposed expansion.

Please find attached the following revised information:

Plans

Module 6.2 Environmental Resources Map
Module 6.2 ZOI
Module 9 Operations Map
Module 18 Reclamation & Bonding
Concrete Plant
Cross Sections
Drainage Area Map

Documents

GIF Pages 2, 3, & 6
Erosion & Sedimentation Pollution Control Plan
5.1 Adjoiners
Module 8
Bonding Calculations
NPDES Draft Public Notice & Rev Pages 1 & 3
Module 10 Operational Info
Module 19 Land Use
Module 23 Vegetation
Rheems Hydro Report
Water Quality Data MW's
Water Quality Data Adjoiners

If you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,
Akens Engineering Associates, Inc.

Rick Caranfa
Vice President

Enclosures