



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

April 12, 2024

Pierson Rheems LLC
426 Swedesboro Road
Pilesgrove, NJ 08098

Re: Technical Deficiencies
Application No. 36080301C6
Pierson Rheems Quarry Operation
West Donegal and Mt. Joy Townships, Lancaster County

Dear Operator:

The Department has reviewed your application and has determined that the following significant deficiencies exist:

1. Address the enclosed comments from Richard Tallman, P.E. (77.126)
2. Address the enclosed comments from Jeff Painter, P.G. from Pennsylvania Game Commission. (77.126)
3. The enclosed comment letters/emails and public hearing comments from stake holders must be addressed. (77.104, 77.126 and PA. CONST. art. I, §27)
4. The General Information Form requires the following corrections (77.104):
 - 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.
 - b. In the Facility Information section “blasting operation” is not checked. If blasting will occur in proposed area, please check yes.
 - 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
 - d. Please list all operations that produce air emissions in question 13 on page 6 or 7.
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. (77.163)

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 (77.202, 77.452):
 - a. Concrete plant and surrounding areas must be bonded for reclamation
 - b. All permits for the concrete plant must be incorporated into the mining permit.
 - 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.
 - d. The air quality permit for the concrete plant must be incorporated into the mining permit.
 - 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.
7. An asphalt plant is located within the permit boundary. The asphalt plant activities and permits must be incorporated into the mining permit. Address if the plant will require bond for removal during reclamation of the site. (77.452).
8. The Exhibit 6.2 Environmental Resources map must contain the following information (77.410):
 - a. Strata strike and dip of geologic structures found in the quarry
 - b. Geologic faults must be shown if known
 - c. Direction of groundwater flow (local and regional)
 - d. All karst features found in the highwall
 - e. The sinkhole(s) that the quarry was found to have contributed to in the village of Rheems
 - f. The 300' setbacks for occupied structures should be shown as a different pattern such as cross hatching rather than stars.
9. All map exhibits (ex. 6.2, 9, 18) must be legible. Please submit a set of map exhibits without the aerial map shown as a layer (77.410).
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. This information should be address in the Module 8. (77.457).
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 (77.457).
12. The Background Water Quality Data must be legible. Submit the information in a legible font size (77.104).
13. Address the following comment on the groundwater model. (77.457):
 - 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.

- 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.
 - c. Clarify why on Figure 2-2 the two streams adjacent to the quarry are not shown along the permit boundary.
 - 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.
 - 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 the area can be approved for mineral extraction. Clarify if mineral extraction will occur in this area.
 - f. Explain why the 50 foot and 25 foot drawn down contours at final build appear to show the pit underwater.
 - g. Clarify if the groundwater model used fixed heads as part of the evaluation.
14. Question 10.2 must be answered for the entire permit area with the proposed expansion area not just the proposed expansion area (77.452).
 15. Provide an alternative to water for dust suppression on road in Module 17.2(b). The quarry will most likely not use water for dust suppression in freezing weather conditions (77.455).
 16. Question 19.3 must be answered (77.456).
 17. Question 19.1(c) must be answered to determine if alternatives to affecting farmland were considered and not considered feasible (77.456).
 18. Clarify how prime farmland soils will be utilized and/or stockpiled on the quarry (77.456).
 19. The reclamation narrative states overburden will be used to reclaim the highwalls. Submit the current volume of overburden on the site (77.456).
 20. Cross sections B-B' and C-C' shows highwalls being reclaimed 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 (77.456).
 21. The overburden piles locations with volumes must be shown on the map exhibits (77.454).
 22. The bonded area for support must be shown as a different color rather than green on an aerial map (77.454).
 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 (77.454).

Should you have any questions regarding the identified deficiencies, please contact me to discuss your concerns or to schedule a meeting. If you believe the stated deficiencies are not significant, you have the option of declining and asking the Department to make a decision based on the information you have already made available. Please keep in mind that if you ignore this request or fail to respond to all of the deficiencies listed above by May 24, 2024, your application may be denied. Also, please note that due to the application deficiencies noted above, the Permit Decision Guarantee timeframes are no longer applicable.

Sincerely,

A handwritten signature in black ink that reads "Tiffany M. Folk". The signature is written in a cursive, flowing style.

Tiffany M. Folk, P.G.
Environmental Group Manager
Bureau of District Mining Operations

cc:

Amiee Bollinger, SMCIS
George Kissinger, SMCI
Akens Engineering Associates Inc. , Consultant
Tickler: 5/24/24
File
MS1-PiersonRheems (4/24)


TMF:lb

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION

Date: May 25, 2023

Subject: Application No.36080301C6
Pierson Rheems, LLC
Rheems Quarry Operation
West Donegal & Mt. Joy Townships, Lancaster County

To (via e-mail): Tiffany Folk, P.G.
Licensed Professional Geologist
Pottsville District Mining Office

From: Jeff Painter, P.G. 
Bureau of Wildlife Habitat Management
Section Oil/Gas and Mineral Development

Thank you for submitting the above referenced mine permit application to our office for review and comment. We have completed an office review and determined that this project should not affect endangered or threatened species of bird or mammal recognized by the Pennsylvania Game Commission (PGC) nor do we anticipate any adverse impacts to any critical or unique habitats. We provide the following comments.

Module 23

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.

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), indiagrass (*Sorghastrum nutans*) and switchgrass (*Panicum virgatum*).

Woody Plants

European Alder is a non-native, Department of Conservation and Natural Resources -listed invasive species and should not be used. The revegetation plan includes unspecified oak, maple, and ash species. We recommend not planting silver maple, a low habitat value

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

Based on our office review only, we have no objections to the proposed revision and issuance of this permit but should project plans change or if additional information becomes available, then this determination could be re-evaluated.

Please feel free to contact me at 717-787-4250 ext. 73621 should you have any questions or concerns.

JJP/jjp

Richard Tallman, P.E. – Environmental Engineer

E&S comments

1. Please review the entire Erosion and Sedimentation plan and how it integrates with the planned expansion. 25 PA Code, §77.458
2. Please review the surface drainage patterns and address the runoff from the Support Area around the scale and stockpile areas that makes 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
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
 - 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
 - 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
4. Please provide the Erosion and Sedimentation Plan for the planned overburden stockpile(s). 25 PA Code, §77.458
5. Please provide a plan to clear the woody vegetation growing in the berm of Pond 2. 25 PA Code, §77.458
6. Please provide a plan to maintain access to NPDES Outfall 002. 25 PA Code, §77.458
7. Please provide a plan to clear the woody vegetation growing in the berm of Pond 3. 25 PA Code, §77.458
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
 - 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.
 - 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
 - d. Please include the discharges/infiltration points from the Delaware Valley Concrete operation in a revised NPDES permit. 25 PA Code, §77.526

**Public Comments for Pierson Rheems Quarry Major Amendment Permit
Submission (existing permit #36080301), West Donegal Twp., Lancaster County,
PA.**

Prepared by Neighbors Against Rheems Quarry Expansion, July 6, 2023

Comment 1: We formally request a Public Hearing to be held with all potentially impacted parties within Village of Rheems and West Donegal Township. The Public Hearing should include representatives of the following regulatory entities:

West Donegal Township

Lancaster County Planning Commission

Lancaster County Conservation District

PADEP Pottsville Mining District

PADEP South Central Regional Office (representatives from the Clean Water, Environmental Cleanup/Brownfields, and Waterways Programs)

PADEP Environmental Quality Board

EPA Region 3, Water Division

All Pennsylvania Department of Environmental Protection offices will be referred to collectively as "The Dept" unless it is necessary to specify a specific office of PADEP.

Comment 2: The 1000' boundary used to determine impacts to property owners is an arbitrary number used statewide by the Dept regardless of underlying geology. Impacts to groundwater from extraction of up to 3 million gallons of groundwater/day in a karst environment can extend up to 2 miles, as shown in a quarry also located in the Epler Formation, sited in Annville (Fosse, R.M., 1969. Mine Dewatering and Recharge in Carbonate Rocks Near Hershey, Pennsylvania. Engineering Geology Case Histories, 7: 45-60). The State of Maryland has instituted Zones of Dewatering Influence (MD Env Code §15-812), which is a mapped, legal boundary drawn around surface mines located in karst terrain within which disruption of wells and damage from subsidence are automatically the responsibility of the permittee to rectify within specified time limits and the permittee must purchase the property if conditions can't be restored to the prior state. These zones are mapped on Maryland Department of the Environment website. The zones extend 1/4 mile to over a mile for some quarries. Its also a required notification on real estate transactions because it makes those properties undesirable.

- What location specific science is Pennsylvania using in determining a 1000' boundary is sufficient when all evidence points to a much wider area of impact when dewatering in karst?
- What legal, written policy does Pennsylvania have in protecting property owners from damage from permitted quarrying in karst?

- The surrounding property owners request additional investigation outside of the 1000' boundary (esp. to the west and south) to determine impacts to residential and agricultural properties.

Comment 3: The permit submission made available for public view was not complete. There were items referenced within the permit as being attached that were not there, specifically a spreadsheet indicating what homes were contacted by Akens Engineering, certified mail receipts verifying those residents were contacted, and lab analysis results of well testing of those residents that allowed it. Akens Engineering also made the comment to Lancaster Newspaper the last week of June 2023 that the '1000' buffer was just a starting point for the company's monitoring work and that Akens is still contacting homeowners.'

- What additional homeowners has Akens yet to contact and on what basis are these homeowners being contacted? Are there additional or different areas of impact that are not being shared in the permit submission?
- When will this ongoing information be added to the permit application?
- Why did Pottsville Mining District mark this permit as complete when there is so much outstanding information and work that hasn't been done yet?
- Why was an incomplete permit package made available for public review?
- Request that the public notification process is redone, this time with the complete permit package made available for public review at West Donegal Township Building.

Comment 4: How many Notices of Violation has the Dept. issued to R.E. Pierson permitted operations within the State of Pennsylvania? Is the Dept familiar with Pierson' violation history outside of mining violations? Is the Dept familiar with Pierson's violation history within the State of NJ?

- R.E. Pierson Materials, 66 Floodgate Road, Logan Twp., Swedesboro, NJ. Site ID 7937, PI# 011776. Ongoing remediation as of 2019. Multiple spills/illegal discharges. More than one contaminant. Soil and groundwater impacted. One of the most contaminated sites in central NJ.
- C&TCO V Cumberland County Improvement Authority, R.E. Pierson Construction, Atlantic Lining Co., 2009 – Pierson is the low bidder on county solid waste contract to expand a landfill. Pierson uses a subcontractor that they don't declare because that contractor had pled guilty to federal tax fraud charges. Pierson then files a Contractor Responsibility Certification for that subcontractor and lies about the history. It gets discovered after the contract is awarded to Pierson as the low bidder. Pierson argues that it shouldn't matter that they falsified documents, the contract had already been awarded. Pierson loses.
- Teamsters (Phila) V Pierson – Coercion, Discharge. Pierson loses.
- 2019 – Pierson pays \$162K in back wages after an investigation in prevailing wage violations.
- Cape May, NJ – Pierson violates sand/gravel quarry permit requirements by digging deeper and wider than permit allowed and walks away from restoration requirements.
- 2009, PADEP Mining Permit transfer process. Pierson is found to be operating without explosion insurance.

Why is it the Dept's position that a company with such documented and frequent disregard for laws and permitting requirement should be given free reign to impact resident's health and properties? Is it the Dept's position that permits are granted even to permittees that have repeatedly violated the law? How many times and what kind of violations must Pierson commit before they are no longer granted permits by PADEP?

Comment 5: After a cursory review of the permit submission, it seems as though it is primarily a regurgitation of information from previous permit submissions, primarily focused on properties to the north and east when the expansion focus was on the northern portion of the quarry. It appears very little work was done by the consultant to determine impacts to the west and south of the quarry expansion area. The difference is properties to the north are within a sandstone formation, so a very different hydrologic relationship to quarry activities. There are only a handful of private water supplies in that area. Most properties to the north and east are on public water. ALL of the properties to the west and south are private residential and agricultural water supplies. The permit erroneously states that there is only agriculture to the west and south.

Comment 6: Portions of the Sweigart property were previously permitted as the next phase of quarry expansion. Why didn't that happen?

HYDROLOGIC RESOURCES AND IMPACTS

Comment 7: In the Hydrology Module, BM-7 shows 'no discharge' for the six-month period the consultant decided to represent. It was during this period that the water from that stream was sampled by the homeowners group and it was absolutely flowing. The pond and upstream spring that are the source for that stream are always flowing (aquatic macroinvertebrates are present, indicating perennial flow). Even as this document is prepared in mid June 2023, after the driest May ever recorded, water is still coming out of that pond and there is flow in the culvert at Bossler Road. The data shown is suspect. Possible faulty equipment or data manipulated to support the false assertion made elsewhere by the consultant that the stream is piped throughout the entire expansion area when it is not.

WATER QUALITY/CONTAMINATION

Comment 8: Karst systems have low self-purification capabilities which makes karst water sources very susceptible to pollution (*Kresic, Neven, Papic, Petar, and Golubic, Radosav, 1992, Elements of groundwater protection in a karst area: Environmental Geology Water Science, v. 20, no. 3, pp. 157-164*). Per- and polyfluoroalkyl substances (or PFAS) are emerging contaminants of concern. PFAS are a persistent environmental toxin that are present in surface water, groundwater, and soil as the result of industrial release and fire fighting/training activities. PFAS are highly mobile and are readily transported via rainwater and surfacewater that then infiltrate downward through the unsaturated zone into groundwater. Most recent studies on PFAS chemical contamination show that these toxins do not flush out of soil but instead persist and release slowly over long periods of time. IN 2019, the USGS Pennsylvania Water Science Center and PADEP sampled statewide for PFAS to determine occurrence and distribution in surfacewater and that that report Per- and Polyfluorinated Alkyl Substances (PFAS)

and associated ancillary data from the Commonwealth of Pennsylvania, USA, 2019 was released in 2021. The corresponding map showed every surface water sample taken in NW Lancaster County as containing some level of PFAS.

When we first learned the quarry would be expanding out into karst area and closer to our private water systems, we were interested in finding out if PFAS was present. We decided to test two stream locations in the area immediately adjacent to the quarry: One at the illegally enclosed, unnamed perennial stream (ST-1) that runs through the Wolgemuth Property to the west of the quarry expansion area (the stream is daylighted when it reaches Bossler Road) and the second sample, also at Bossler Road, was the perennial stream to the east of the quarry (ST-2) into which the quarry currently dewateres. We also tested one untreated, unfiltered private groundwater well (W-1) immediately downstream of the quarry expansion area, and downstream of the first stream location. Coordination occurred with ALS Laboratory Group of Middletown which paired the resident group with ALS of Holland, MI which performs the PFAS analysis. The proper sample bottles were sent and samples were collected (following proper PFAS protocol) on March 29, 2022 by Meredith Glazier with Margaret Lisi observing. Ms Glazier is an environmental scientist with 27 yrs experience. Samples were overnighted on ice via Fedex to Michigan the following day. Laboratory results are attached to this document.

The well sampled (W-1) was non-detect for all PFAS analytes sampled for.

ST-1 lab analysis showed 19 ppt of PFOS and 3.2 ppt of PFOA.

ST-2 analysis showed 4.3 ppt for PFOS and 6.8 ppt for PFHxS.

This demonstrates that PFAS is present at one stream location at Maximum Contaminant Levels (MCLs) currently prohibited by PADEP for public drinking water and the Statewide Health Standard for groundwater because they represent a severe health risk. Both locations exceed the proposed Environmental Protection Agency (EPA) draft Maximum Contaminant Level of 4 ppt, the lowest feasible level possible based on current lab analysis technology. EPA has determined that both PFOS and PFOA are carcinogens, and are not safe at any level without a risk of adverse health effects.

Currently the area to the southwest and south of the proposed quarry have not had PFAS migrate into their drinking water. Natural infiltration rates are filtering the contaminants out. With the expansion into the karst area to the SW of the current quarry area, massive amounts of dewatering (3 million gallons per day) will effectively remove any naturally occurring attenuation and expedite the migration of PFAS into our private water supplies. With the approval of this quarry expansion permit, the department will knowingly be introducing a regulated contaminant into the private water supplies of numerous households and agricultural operations. There is no public water supply available nearby. Resident's health/livestock and crops intended for consumption will be compromised and the value of our properties will be destroyed without the installation of expensive filtration systems and expensive water analysis on a frequent basis.

- No background water samples were taken outside the 1000' boundary despite multiple wells being shown within the zone of influence. Any well shown within the 10' zone of influence should be sampled and have background conditions established.

- What will the Dept. do to protect the health of surrounding homeowners against a contaminant the Dept regulates in public water supplies and groundwater as a dangerous toxin?
- Why wasn't the Pottsville District Mining Office aware of their own agency's report detailing the presence of PFAS in surface water in NW Lancaster County? And why wasn't water discharge from the quarry sampled for PFAS out of caution?
- Why wasn't the quarry's NPDES permit revised to include PFAS when the Pottsville District Mining Office was verbally made aware during the NPDES permit comment period that PFAS was present in the stream the quarry is discharging to?
- Prior to permit approval, a study on how pervasive the PFAS contamination is in the surrounding area is necessary. The source must be determined. A plume needs to be delineated. Homeowner's wells within 1 mile radius should be sampled and analyzed for PFAS to develop a baseline. If this quarry expansion is approved, quarterly well monitoring of households/farms within a 1 mile radius should be ongoing in order to catch PFAS contamination as quickly as possible and residents should be outfitted with filtration systems equipped to removed all traces of PFAS in addition to filter replacements for the remainder of the life of the quarry. The Hydrologic Study did mention that every home that participated in the hydrologic study has some form of filtration system installed for sediment but not for chemical analytes.
- If the Dept puts the responsibility of showing PFAS contamination in their well water, is it reasonable to expect a homeowner to pay almost \$500 for analysis and overnight shipping on ice for water samples multiple times per year?
- The quarry will be discharging water contaminated with PFAS to an unnamed tributary to Donegal Creek, headwaters to Donegal Creek, which is considered a Naturally Reproducing Trout Stream to Route 23. Coordination with Pennsylvania Fish and Boat Commission should occur as game fish, esp trout, accumulate 'forever chemicals' like PFAS at alarming levels.

Comment 10: The National Pollutant Discharge Elimination System (NPDES) is a Federal program administered by the EPA, with some states authorized to administer the permits. Pennsylvania is such a state. In April of 2022, EPA issued a memorandum "Addressing PFAS Discharge in EPA-Issued NPDES Permit and Expectations Where EPA is the Pretreatment Control Authority." In this memo, adherence to the 2021 PFAS Strategic Roadmap (also issued by EPA) leverages the NPDES permitting system to reduce PFAS discharges to waterways. In states where EPA is the permitting authority, monitoring of 6 PFAS compounds has been a requirement since July 2020. A December 2022 EPA memorandum "Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs" issues guidance to states that administer permits on sampling for PFAS as part of NPDES permits if there is reason to suspect that PFAS is present, either through a list of specific industries, past site use, or known occurrences within the vicinity. EPA tasked states to establish technology based effluent limits (TBELS), water quality based effluent limits (WQBELS) derived from state water quality standards, and where necessary, water quality narrative criteria to limit permittees PFAS discharges while EPA finalized effluent limitation guidelines (ELGs).

The person in charge of approving NPDES permits at Pottsville Mining District was aware of potential sources of PFAS adjacent to the quarry property (fire station, via phone call 6/15/23), PADEP identified

the former Elizabethtown Landfill, a capped, still contaminated Superfund site (in a former quarry!) approximately a mile from Rheems Quarry as a potential source of PFAS in the 2019 USGS/PADEP report and the Pottsville Mining Office project PG was informed verbally that PFAS was found in surface water samples adjacent to the quarry during the public comment period for the Quarry's NPDES permit. There was ample evidence to suggest that wastewater generated from the quarry contained PFAS and should be analyzed for PFAS as a condition of their new NPDES permit, yet it was not. Why not?

Comment 11: Five Concentrated Animal Feeding Operations (CAFOs) are located within a half-mile of the expansion area. Limestone already has poor water filtering capabilities. Pathogens from the surface quickly make their way down to groundwater when drawdown is occurring. Was any consideration or modeling done to determine impacts to groundwater from the CAFOs that are present within and just outside the 1000' boundary?

KARST

Comment 12: In 2005, the paper "Resolving Sinkhole Issues: A State Government Perspective", was authored by Sharon Hill of PADEP Bureau of Mining Program. The paper stated that the Dept. had "no formalized policy or procedure to address sinkhole problems of any size even if they are related to a Department authorization (permit) or constitute a public emergency (with the POSSIBLE exception of the mining program)." It then states that the Pottsville Mining District, in 1999, began requiring a sinkhole repair plan as part of permit documentation (which Pierson's permit application includes).

- What is the current official PADEP formalized policy or procedure for sinkhole problems related to Department authorized activities?
- In the Sinkhole Mitigation Plan, it states that only sinkholes located within the 'zone of influence' will be considered. What is the definition of the zone of influence and how is it determined?
- If a property owner outside of the 'zone of influence' experiences subsidence related to retreat of the water table, is it the property owner's responsibility to prove connection to quarry activities or is it the Dept's?
- The guidance indicates that first the quarry must be identified and then PADEP. Will homeowners be provided written guidance and some clear path of notifying and resolving subsidence issues?
- If a sinkhole related to quarry activities were to cause such damage to a property as to prevent relocation of a well and septic system, and as a result loss of use of the property, what path to relief would homeowners have through the Dept? Has the Dept. ever had to condemn a property due to damage from permitted quarrying activities and how was that handled?

Comment 13: Karst supplement states that no voids were detected on the Sweigarts property during a boring program in 1990 and no voids were detected during drilling of 4 monitoring wells in 2022. It neglects to mention a sinkhole opened up on Sweigarts property in the last several years that required a multiple tri-axes of fill material to stabilize and was paid for by Pierson. During drilling of Tomasetti's well (also paid for by Pierson) to the south of Bossler Road, Myers Brothers Well Drillers noted there was

a very large cavern adjacent to the property that had captured the water table. Rheems Elementary had sinkholes open up and filled in countless times. Pottsville Mining Office representatives recently completed a field view in the Spring of 2023, but managed to miss a very large sinkhole currently open on the west side of Landis Road, west of the quarry. This sinkhole system extends under Landis Road to the east side (Wolgemuth Property) where a sinkhole large enough to drive a car into was haphazardly filled approximately 10 years ago. Did PADEP coordinate with West Donegal Township to determine how many sinkholes the Twp had repaired on and adjacent to Twp roadways in the past?

Comment 14: The karst supplement states that "The quarry pumping has the potential to increase karst development. The monitoring systems in place will be adequate and protect the surrounding aquifer and its uses from mining impacts." Those same monitoring systems did not protect two homeowners from losing their water supplies, why would these monitoring systems suddenly work for karst features?

Comment 15: In the 30 Acre Hydrologic Study, the statement is made that there are only two mapped historic sinkholes, yet according to the Density of Mapped Karst Features in South-Central and Southeastern Pennsylvania (Kochanov and Reese, 2003, DCNR), the area around the quarry is depicted as red which is indicative of 400-600 karst features per square mile. The DCNR PaGeode Sinkhole map for the project area has over 75 surface depressions within the 1000' boundary alone and over a hundred more shown to the south of Bossler Road and around the intersection of Landis and Bossler in the vicinity of 8 residential dwellings. Were all the surface depressions viewed by DEP to determine if they had progressed to sinkholes? The PaGeode Sinkhole Map is based on decades old data. Was a field view conducted by the Dept to determine the presence of sinkholes not shown on that mapping? Why was a 1000' boundary used for sinkholes? The State of Maryland indicates sinkholes are likely within a half mile of a quarry in karst. What science is the Dept using to determine that sinkholes will not occur outside of 1000'? If a sinkhole forms outside the 1000' boundary, is the property then responsible to pay thousands of dollars for a geotechnical firm to prove the quarry is responsible or just pay thousands of dollars on their own to fix their property?

STRUCTURAL SURVEYS

Comment 16: Property owners within a half-mile of the quarry location that have homes constructed before 1923 request structural surveys for their home. Despite the Dept's claim that blasting in the quarry only results in noise, long time residents know this to be false and many have suffered structural damage to their homes as a result of excessively strong blasts performed at the quarry. Numerous recorded violations for the quarry regarding amount of explosive used, placement of blast monitoring equipment, operator error, etc. illustrates that the quarry is not honest in regards to blasting activities. How many times is the Dept. willing to accept the 'it was an honest mistake' excuse from Pierson and why should property owner continue to suffer damage?

AIR QUALITY

Comment 17: Lancaster County is in Maintenance Status for PM_{2.5} and has close to the worst air quality in PA and fails nationally every year, actually getting worse each year for PM_{2.5}. Blasting and removing rock from this new parcel will generate far more fugitive dust than any resident has been used to because it is at the surface. In addition, its been proposed that the enormous pile will be broken down and used for restoration of the original pit, generating large amounts of PM air pollution from the

movement of material and the truck traffic. What studies have been done by the Dept. to determine if future quarry activities will result in a net increase of the criteria pollutant? Has any study been conducted to identify sensitive receptors in the adjacent area? What mitigation methods will be in place to protect residents from increased particulate matter air pollution other than the proposed berm?

We request that an air quality study be prepared for the quarry activities. Criteria pollutant emission calculations and air quality modeling should be performed for the existing baseline and future planned actions.

Comment 18: Has the dust generated from blasting ever been tested for asbestos? We request asbestos testing from several points if it has not been previously analyzed.

NOISE

Comment 19: Ground vibration induced by quarry blasting causes damage to nearby utilities and structures. How will blasting and quarrying of the expansion area affect the level of groundborne vibration and groundborne noise that residents currently experience from quarry activities? If the answer is an increase in vibration and noise, we request a vibration study for any resident within a half mile radius that requests it.

30 Acre Expansion Hydrologic Study

Comment 20: Executive Summary -- makes the statement that minimal impacts to the surrounding aquifer will occur. The claim is made repeatedly throughout this permit package that the presence of monitoring wells/data loggers etc. will alert quarry personnel to changes in hydrology and allow them to address impacts to residential properties (and avoid unnecessary liability).

"These wells are located on the attached 6.2 Environmental Resources Map. These wells have permanent data loggers installed, which collect data daily. This extensive list of monitoring wells will provide an indication as to how the various aquifers/formations are responding to the dewatering activities of the quarry. These wells also help to protect the surrounding environment from any negative impacts. If the water level within any of these wells takes a sudden drop, the incident will be investigated. The water level readings should also help to protect the quarry from unnecessary liability for problems that may arise that were not caused by dewatering activities."

Yet two residential wells have gone dry since these monitoring systems have been in place and no preventative measures were taken and Pierson did not immediately become involved. As this document is being prepared, the Haas residence is going on over 5 weeks with limited water availability. Mr. Haas is an elderly stroke survivor and unable to eat solid foods, limited to a liquid diet, and has to live with daily stress that he will have no water coming into his home while the Dept and Pierson dragged their feet determining culpability for the loss of the well and scheduling the replacement. The well was replaced at 4 weeks and became cloudy and still not able to be used for consumption. Kathy Tomasetti, 430 Bossier Road, was without water for MONTHS at the end of 2021 into 2022. She could not afford to have the well replaced to tried to make due with purchased water. It was only when the Wolgemuths (the property owners profiting from the quarry expansion) became aware that they contacted Pierson and the well was restored. Both residences were determined to be within the cone of influence and the

quarry has known this for over a year yet nothing was done. The consultant for the quarry lied to LNP for an article on June 21st about all three of the homes (Haas and Tomasetti included) being contacted previously for background water sampling.

- Why were the wells for the two residential properties to the south of Bossler Road (identified by Pierson's consultants as impacted properties) allowed to go dry with nothing being done ahead of time? Why was there no coordination?
- Who at Pierson is monitoring these real time data loggers and who is responsible for making the determination that preventative measures be taken to prevent loss of water supply to surrounding residents?
- What explains the lack of action on Pierson's part when hydrology supposedly being monitored did not detect two residential wells going dry: the data loggers don't work? Pierson isn't monitoring anything? Pierson couldn't care less about impacts to surrounding property owners?
- What data exists on the anticipated impact to the 10 residential water supplies to the immediate southwest of the expansion area? Is it just MW22-4?
- If the data presented in the report suggested that homes outside of the 1000' boundary were within the cone of influence, why wasn't the boundary expanded?
- What is the Dept. policy/chain of command/timeline for restoration of a residential water supply?
- What is the Dept. policy/timeline for restoration of water supplies to the multiple CAFOs located just outside the 1000' boundary?
- Will residents and agricultural operators be reimbursed for providing their own emergency water supplies while waiting for the Dept and/or Pierson to determine cause/responsibility/and drill a new well? Who will reimburse residents and where is the written policy for that process?
- In 1946, a blast in a hanging wall of a quarry outside of Hershey, PA (also the Epler Formation) exposed a 6" wide solution channel at about 275' bgs. Water flowed out at 8-10,000 gpm and caused wells within a 1 1/2 mile radius to go dry (Foote, R.M. 1953, Groundwater behavior in the Hershey Valley, Pennsylvania: Geological Society of America Bulletin, v. 64, pp 623-646). What resources does the Dept have available to restore water to a population that large? Is there a legal limit to how long a homeowner can go without a water supply before they are able to take legal action against the State?
- Why should any surrounding property owner have any degree of confidence that impacts to their property and health will be quickly and fairly by the Dept. and R. E. Pierson, esp. when the consultant for the quarry blatantly lies about what homeowners have been contacted?

Comment 21: Statement made in Geology Section: "It is evident from published literature and numerous field views that Rheems Quarry is so intensely folded and faulted that a single strike and dip reading could not adequately describe the attitude of the rock units exposed here." So how are you determining there will be no deleterious effect to the residential properties to the west, southwest, and south when the geology is unknowable? One well in the Wolgemuth's front yard isn't capturing what's happening to the water table under all the homes on Bossler and Landis to the SW of the expansion area.

Comment 22: Surface Water: According to Lancaster County Conservation District, the stream to the west of the quarry was enclosed illegally. This perennial waterway qualifies as jurisdictional Waters of the United States and the enclosure was never permitted by the Dept. The illegally enclosed stream on the Wolgemuth property is daylighted on the south side of Heisey Quarry Road for about 50' before it is enclosed, just outside the creatively drawn 1000' boundary (MP-3). The stream enclosure ends 25' north of its crossing with Bossler Road, MP-7 (well within the 1000' boundary) and is daylighted the remainder of its length. The statement is made that this will not enter the quarry dewatering system.

- On what basis is the determination made that extracting almost 3 million gallons of water a day will not cause the capture of this surface water stream from the sections where it is daylighted?
- This stream was enclosed in a 10" PVC pipe in the early 2000s. Did Aiken engineering perform a survey on the integrity of this pipe for the entire length? How is the determination being made that this stream will not be captured by quarry dewatering activities?

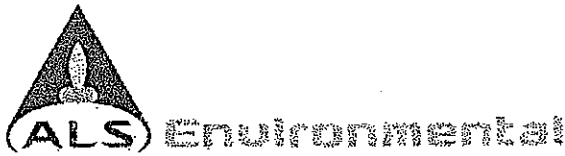
GENERAL COMMENTS

Comment 23: Owners of private well understand that existing contaminants can be present in their groundwater and that testing and filtering systems are needed. Can the state in the form of the Department of Environmental Protection issue permits for activities that will contaminate an aquifer and destroy private water supplies in the surrounding area?

Comment 24: The expansion will consume 30 acres of Prime Farmland soils in an area of rapidly disappearing agricultural resources due to warehouse development. What mitigation measures will be required to compensate for this loss of agriculturally significant soils?

Comment 25: The wells installed in 2022 in preparation for this permit expansion are not at enough number or distance to determine and/or forecast impacts from dewatering. By the time these wells register any kind of significant drop, residential and agricultural wells outside that area are in trouble as we have just seen with the Haas well. Additional investigation is needed.

Comment 26: What is the Dept's defense against this action constituting a violation of the Takings Clause of the 5th Amendment to the Constitution: the taking of private property (or the enjoyment of that private property) for a public use? Residents and farmers are in constant fear of their water supply being contaminated with PFAS and/or disappearing and having to wait weeks or longer for restoration at the hands of R.E. Pierson, a company that exists entirely on public tax dollars through Pennsylvania Department of Transportation and Pennsylvania Turnpike Commission roadway construction contracts (and similar in the state of New Jersey)? The enjoyment of our properties (and the monetary value of the property) is being taken permanently by the State of Pennsylvania (and the county of Lancaster and West Donegal Township) in order to secure an aggregate supply for public transportation projects with no just compensation.



12-Apr-2022

Meredith Glazier
Meredith Glazier
793 Bossler Road
Elizabethtown, PA 17022

Re: Rheemis Query

Work Order: 22040010

Dear Meredith,

ALS Environmental received 3 samples on 31-Mar-2022 04:30 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: PA: 68-03827

ALS GROUP USA, a subsidiary of ALS Laboratory Group, a 100% employee-owned company



RIGHT SOLUTIONS. RIGHT PARTNERS.

Client: Meredith Glazier
Project: Rheems Query
Work Order: 22040010

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
22040010-01	WDTW-1	Drinking Wat		3/29/2022 16:30	3/31/2022 16:30	<input type="checkbox"/>
22040010-02	WDTSt-1	Surface Water		3/29/2022 16:45	3/31/2022 16:30	<input type="checkbox"/>
22040010-03	WDTSt-2	Surface Water		3/29/2022 17:00	3/31/2022 16:30	<input type="checkbox"/>

Client: Meredith Glazier
Project: Rheims Query
Work Order: 22040010

Case Narrative

Samples for the above noted Work Order were received on 03/31/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria:

Extractable Organics:

Batch 194010, Method E537 Mod, Sample 22040010-02A DUP: SUR01: Surrogate high due to matrix interference. 13C2-FtS 4:2, 13C2-FtS 6:2, 13C2-FtS 8:2

Batch 194010, Method E537 Mod, Sample WDTSt-1 (22040010-02A): The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated: PFDS

Batch 194010, Method E537 Mod, Sample WDTSt-1 (22040010-02A): The Continuing Calibration Verification did not meet acceptance criteria with high bias; however, the sample results were non-detect for the following analytes: HFPO-DA, PFPeS, N-MeFOSE

Batch 194010, Method E537 Mod, Sample WDTSt-1 (22040010-02A): The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. 13C-PFTeDA_IS, 13C2-PFHxDA_IS

Batch 194010, Method E537 Mod, Sample WDTSt-1 (22040010-02A): Surrogate high due to matrix interference. 13C2-FtS 4:2, 13C2-FtS 6:2, 13C2-FtS 8:2

Batch 194010, Method E537 Mod, Sample WDTSt-1 (22040010-02A): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low. 13C2-PFHxDA

Client: Meredith Glazier
Project: Rheems Query
Work Order: 22040010

Case Narrative

Batch 194010, Method E537 Mod, Sample WDTSt-2 (22040010-03A): The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated: PFDS

Batch 194010, Method E537 Mod, Sample WDTSt-2 (22040010-03A): The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: HFPO-DA, NMeFOSE, PFPeS

Batch 194010, Method E537 Mod, Sample WDTSt-2 (22040010-03A): Surrogate high due to matrix interference. 13C2-FtS 4:2, 13C2-FtS 6:2

Batch 194010, Method E537 Mod, Sample 22040010-02A DUP: The RPD between the sample and its duplicate was out of control. The corresponding sample result should be considered estimated for this analyte. See attached QC report.

Batch 194010, Method E537 Mod, Sample 22040010-02A DUP: The extracted internal standard response was outside recovery criteria with low bias; sample results may exhibit bias. 13C-PFTeDA_IS, 13C2-PFHxDA_IS

Batch 194160, Method E537.1, Sample 22032311-01A MS2: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: PFTeA

Batch 194160, Method E537.1, Sample 22032311-01A MS2: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: PFOS

Client: Meredith Glazier
 Project: Rheems Query
 WorkOrder: 22040010

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited.
B.	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD: Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
ng/L	Nanograms per Liter

ALS Group, USA

Date: 12-Apr-2022

Client: Meredith Glazier

Project: Rheems Query

Work Order: 22040010

Sample ID: WDTW-1

Lab ID: 22040010-01

Collection Date: 3/29/2022 04:30 PM

Matrix: DRINKING WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537.1			E537.1		Prep: E537.1 4/5/22 14:35	Analyst: AK
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		2	ng/L	1	4/6/2022 11:06 PM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		2	ng/L	1	4/6/2022 11:06 PM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorobutanesulfonic Acid (PFBS)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorodecanoic Acid (PFDA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorododecanoic Acid (PFDoA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluoroheptanoic Acid (PFHpA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorohexanesulfonic Acid (PFHxS)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorohexanoic Acid (PFHxA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorononanoic Acid (PFNA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorooctanesulfonic Acid (PFOS)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorooctanoic Acid (PFOA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorotetradecanoic Acid (PFTeA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluorotridecanoic Acid (PFTriA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Perfluoroundecanoic Acid (PFUnA)	ND		2	ng/L	1	4/6/2022 11:06 PM
11CI-PFOUdS	ND		2	ng/L	1	4/6/2022 11:06 PM
9CI-PF3ONS	ND		2	ng/L	1	4/6/2022 11:06 PM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		2	ng/L	1	4/6/2022 11:06 PM
Surr: 13C2-PFHxA	120		70-130	%REC	1	4/6/2022 11:06 PM
Surr: 13C2-PFDA	107		70-130	%REC	1	4/6/2022 11:06 PM
Surr: d5-N-EFOSAA	106		70-130	%REC	1	4/6/2022 11:06 PM
Surr: 13C3-HFPO-DA	103		70-130	%REC	1	4/6/2022 11:06 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 12-Apr-2022

Client: Meredith Glazier
 Project: Rheems Query
 Sample ID: WDTSI-1
 Collection Date: 3/29/2022 04:45 PM

Work Order: 22040010
 Lab ID: 22040010-02
 Matrix: SURFACE WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED			E537 MOD	Prep: E537 Mod 4/1/22 16:02		Analyst: AK
Fluorotelomer Sulphonic Acid 4:2 (FIS 4:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 6:2 (FIS 6:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 8:2 (FIS 8:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 10:2 (FIS 10:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorobutanesulfonic Acid (PFBS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorobutanoic Acid (PFBA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorodecanoic Acid (PFDA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorododecanesulfonic Acid (PFDoS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorohexadecanoic Acid (PFHxDA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorohexanesulfonic Acid (PFHxS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorohexanoic Acid (PFHxA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorononanoic Acid (PFNA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorooctadecanoic Acid (PFODA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorooctanesulfonic Acid (PFOS)	19		1.9	ng/L	1	4/2/2022 06:29 AM
Perfluorooctanoic Acid (PFOA)	3.2		1.9	ng/L	1	4/2/2022 06:29 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-ethylperfluoro-1-octanesulfonamide	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-Ethylperfluorooctanesulfonamidoethanol	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-methylperfluoro-1-octanesulfonamide	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	4/2/2022 06:29 AM
N-	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Methylperfluorooctanesulfonamidoethanol	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.7	ng/L	1	4/2/2022 06:29 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 12-Apr-2022

Client: Meredith Glazier
 Project: Rheems Query
 Sample ID: WDTSt-1
 Collection Date: 3/29/2022 04:45 PM

Work Order: 22040010
 Lab ID: 22040010-02
 Matrix: SURFACE WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
11Cl-Pf3OUdS	ND		4.7	ng/L	1	4/2/2022 06:29 AM
9Cl-PF3QNS	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Surr: 13C2-FtS 4:2	202	S	50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-FtS 6:2	212	S	50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-FtS 8:2	166	S	50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFDA	109		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFDnA	112		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFHxA	116		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFHxA	48.9	S	50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFtEA	70.0		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C2-PFUnA	100		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C3-HFPO-DA	84.7		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C3-PFBS	93.8		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C4-PFBA	120		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C4-PFHpA	95.0		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C4-PFOA	114		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C4-PFOS	132		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C5-PFNA	124		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C5-PFPeA	100		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 13C8-FOSA	77.8		50-150	%REC	1	4/2/2022 06:29 AM
Surr: 18O2-PFHxS	88.1		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d5-N-EtFOSA	89.5		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d5-N-EtFOSAA	82.8		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d9-N-EtFOSE	103		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d3-N-MeFOSA	101		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d3-N-MeFOSAA	110		50-150	%REC	1	4/2/2022 06:29 AM
Surr: d7-N-MeFOSE	93.9		50-150	%REC	1	4/2/2022 06:29 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 12-Apr-2022

Client: Meredith Glazier
 Project: Rheems Query
 Sample ID: WDTSt-2
 Collection Date: 3/29/2022 05:00 PM

Work Order: 22040010
 Lab ID: 22040010-03
 Matrix: SURFACE WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PFAS BY EPA 537 MODIFIED			E537 MOD	Prep: E537 Mod 4/1/22 16:02		Analyst: AK
Fluorotelomer Sulphonic Acid 4:2 (FIS 4:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 6:2 (FIS 6:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 8:2 (FIS 8:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 10:2 (FIS 10:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorobutanesulfonic Acid (PFBS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorobutanoic Acid (PFBA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorodecanesulfonic Acid (PFDS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorodecanoic Acid (PFDA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorododecanesulfonic Acid (PFDoS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorododecanoic Acid (PFDoA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluoroheptanesulfonic Acid (PFHpS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluoroheptanoic Acid (PFHpA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorohexadecanoic Acid (PFHxDA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorohexanesulfonic Acid (PFHxS)	6.8		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorohexanoic Acid (PFHxA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorononanesulfonic Acid (PFNS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorononanoic Acid (PFNA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorooctadecanoic Acid (PFODA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorooctanesulfonamide (PFOSA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorooctanesulfonic Acid (PFOS)	4.3		1.9	ng/L	1	4/2/2022 08:42 AM
Perfluorooctanoic Acid (PFOA)	ND		1.9	ng/L	1	4/2/2022 08:42 AM
Perfluoropentanesulfonic Acid (PFPeS)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluoropentanoic Acid (PFPeA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorotetradecanoic Acid (PFTeA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluorotridecanoic Acid (PFTriA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Perfluoroundecanoic Acid (PFUnA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-ethylperfluoro-1-octanesulfonamide	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-Ethylperfluorooctanesulfonamidoethanol	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-methylperfluoro-1-octanesulfonamide	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-Methylperfluorooctanesulfonamidoacetic Acid	ND		4.7	ng/L	1	4/2/2022 08:42 AM
N-Methylperfluorooctanesulfonamidoethanol	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
4,8-Dioxa-3H-perfluorononanoic Acid (DONA)	ND		4.7	ng/L	1	4/2/2022 08:42 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 12-Apr-2022

Client: Meredith Glazier
 Project: Rheims Query
 Sample ID: WDTSt-2
 Collection Date: 3/29/2022 05:00 PM

Work Order: 22040010
 Lab ID: 22040010-03
 Matrix: SURFACE WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
11Cl-Pf3OUdS	ND		4.7	ng/L	1	4/2/2022 08:42 AM
9Cl-PF3ONS	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Surr: 13C2-FIS 4:2	164	S	50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-FIS 6:2	170	S	50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-FIS 8:2	128		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFDA	112		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFDoA	92.4		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFHxA	127		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFHxDA	90.1		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFTeA	104		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C2-PFUnA	116		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C3-HFPO-DA	89.8		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C3-PFBS	105		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C4-PFBA	131		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C4-PFHpA	101		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C4-PFOA	132		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C4-PFOS	135		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C5-PFNA	144		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C5-PFPeA	109		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 13C8-FOSA	85.6		50-150	%REC	1	4/2/2022 08:42 AM
Surr: 18O2-PFHxS	89.4		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d5-N-EtFOSA	99.3		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d5-N-EtFOSAA	96.3		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d9-N-EtFOSE	107		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d3-N-MeFOSA	114		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d3-N-MeFOSAA	116		50-150	%REC	1	4/2/2022 08:42 AM
Surr: d7-N-MeFOSE	92.1		50-150	%REC	1	4/2/2022 08:42 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 12-Apr-22

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010 Instrument ID LCMS1 Method: E537 Mod

MBLK Sample ID: MBLK-194010-194010 Units: ng/L Analysis Date: 4/2/2022 05:47 AM
 Client ID: Run ID: LCMS1_220401B SeqNo: 8293683 Prep Date: 4/1/2022 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid 4:2 (FtS)	ND	5.0								
Fluorotelomer Sulphonic Acid 6:2 (FtS)	ND	5.0								
Fluorotelomer Sulphonic Acid 8:2 (FtS)	ND	5.0								
Fluorotelomer Sulphonic Acid 10:2 (FtS)	ND	5.0								
Perfluorobutanesulfonic Acid (PFBS)	ND	5.0								
Perfluorobutanoic Acid (PFBA)	ND	5.0								
Perfluorodecanesulfonic Acid (PFDS)	ND	5.0								
Perfluorodecanoic Acid (PFDA)	ND	5.0								
Perfluorododecanesulfonic Acid (PFDoS)	ND	5.0								
Perfluorododecanoic Acid (PFDoA)	ND	5.0								
Perfluoroheptanesulfonic Acid (PFHpS)	ND	5.0								
Perfluoroheptanoic Acid (PFHpA)	ND	5.0								
Perfluorohexadecanoic Acid (PFHxDA)	1.798	5.0								J
Perfluorohexanesulfonic Acid (PFHxS)	0.3712	5.0								J
Perfluorohexanoic Acid (PFHxA)	ND	5.0								
Perfluoronanesulfonic Acid (PFNS)	ND	5.0								
Perfluoronanoic Acid (PFNA)	ND	5.0								
Perfluorooctadecanoic Acid (PFODA)	ND	5.0								
Perfluorooctanesulfonamide (PFOSA)	ND	5.0								
Perfluorooctanesulfonic Acid (PFOS)	ND	2.0								
Perfluorooctanoic Acid (PFOA)	ND	2.0								
Perfluoropentanesulfonic Acid (PFPeS)	ND	5.0								
Perfluoropentanoic Acid (PFPeA)	ND	5.0								
Perfluorotetradecanoic Acid (PFTeA)	ND	5.0								
Perfluorotridecanoic Acid (PFTriA)	ND	5.0								
Perfluoroundecanoic Acid (PFUnA)	ND	5.0								
N-ethylperfluoro-1-octanesulfonamide	ND	5.0								
N-Ethylperfluorooctanesulfonamidoacet	ND	5.0								
N-Ethylperfluorooctanesulfonamidoeth	ND	5.0								
N-methylperfluoro-1-octanesulfonamid	ND	5.0								
N-Methylperfluorooctanesulfonamidoac	ND	5.0								
N-Methylperfluorooctanesulfonamidoel	ND	5.0								
Hexafluoropropylene-oxide dimer acid	ND	5.0								
4,8-Dioxo-3H-perfluorononanoic Acid	ND	5.0								
11CI-PFOUds	ND	5.0								
9CI-PF3ONS	ND	5.0								
Sum: 13C2-FtS 4:2	144.4	0	149.4	0	96.6	50-150	0			
Sum: 13C2-FtS 6:2	144.8	0	152	0	95.3	50-150	0			
Sum: 13C2-FtS 8:2	146.9	0	153.3	0	95.9	50-150	0			
Sum: 13C2-PFDA	164.3	0	160	0	103	50-150	0			
Sum: 13C2-PFDoA	127.3	0	160	0	79.6	50-150	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems:Query

QC BATCH REPORT

Batch ID: 194010	Instrument ID: LCMS1	Method: E637 Mod						
Surr: 13C2-PFHxA	164.9	0	160	0	103	50-150	0	
Surr: 13C2-PFHxDA	135.4	0	160	0	84.6	50-150	0	
Surr: 13C2-PFTeA	150.7	0	160	0	94.2	50-150	0	
Surr: 13C2-PFUnA	169.7	0	160	0	106	50-150	0	
Surr: 13C3-HFPO-DA	121.2	0	160	0	75.8	50-150	0	
Surr: 13C3-PFBS	128.5	0	148.8	0	86.4	50-150	0	
Surr: 13C4-PFBA	165.7	0	160	0	104	50-150	0	
Surr: 13C4-PFHpA	142.1	0	160	0	88.8	50-150	0	
Surr: 13C4-PFOA	176.4	0	160	0	110	50-150	0	
Surr: 13C4-PFOS	184.1	0	152.8	0	120	50-150	0	
Surr: 13C5-PFNA	188.1	0	160	0	118	50-150	0	
Surr: 13C5-PFPeA	138.1	0	160	0	86.3	50-150	0	
Surr: 13C8-FOSA	107.7	0	160	0	67.3	50-150	0	
Surr: 18O2-PFHxS	128.5	0	151.2	0	85	50-150	0	
Surr: d5-N-EiFOSA	121	0	160	0	75.6	50-150	0	
Surr: d5-N-EiFOSAA	120.4	0	160	0	75.2	50-150	0	
Surr: d9-N-EiFOSE	147.3	0	160	0	92.1	50-150	0	
Surr: d3-N-MeFOSA	136.3	0	160	0	85.2	50-150	0	
Surr: d3-N-MeFOSAA	134.2	0	160	0	83.9	50-150	0	
Surr: d7-N-MeFOSE	125.9	0	160	0	78.7	50-150	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010 Instrument ID: LCMS1 Method: E537 Mod

LCS	Sample ID: LCS-194010-194010	Units: ng/L	Analysis Date: 4/4/2022 06:40 PM							
Client ID:	Run ID: LCMS1_220404B	SeqNo: 8298125	Prep Date: 4/1/2022 DP: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid 4:2 (FtS)	36.86	5.0	29.9	0	123	63-143	0			
Fluorotelomer Sulphonic Acid 6:2 (FtS)	34.79	5.0	30.3	0	115	64-140	0			
Fluorotelomer Sulphonic Acid 8:2 (FtS)	41.51	5.0	30.7	0	135	67-138	0			
Fluorotelomer Sulphonic Acid 10:2 (FtS)	31.91	5.0	30.8	0	104	40-160	0			
Perfluorobutanesulfonic Acid (PFBS)	31.55	5.0	28.3	0	111	72-130	0			
Perfluorobutanoic Acid (PFBA)	32.42	5.0	32	0	101	73-129	0			
Perfluorodecanesulfonic Acid (PFDS)	22.6	5.0	30.8	0	73.4	53-142	0			
Perfluorodecanoic Acid (PFDA)	32.92	5.0	32	0	103	71-129	0			
Perfluorododecanesulfonic Acid (PFDC)	26.78	5.0	31	0	86.4	69-134	0			
Perfluorododecanoic Acid (PFDoA)	34.58	5.0	32	0	108	72-134	0			
Perfluoroheptanesulfonic Acid (PFHpS)	28.12	5.0	30.5	0	92.2	69-134	0			
Perfluoroheptanoic Acid (PFHpA)	39.58	5.0	32	0	124	72-130	0			
Perfluorohexadecanoic Acid (PFHxDA)	31.09	5.0	32	0	97.2	70-130	0			
Perfluorohexanesulfonic Acid (PFHxS)	28.86	5.0	29.1	0	99.2	68-131	0			
Perfluorohexanoic Acid (PFHxA)	30.82	5.0	32	0	96.3	72-129	0			
Perfluorononanesulfonic Acid (PFNS)	28.96	5.0	30.7	0	94.3	69-127	0			
Perfluorononanoic Acid (PFNA)	30.26	5.0	32	0	94.6	69-130	0			
Perfluorooctadecanoic Acid (PFODA)	37.98	5.0	32	0	119	70-130	0			
Perfluorooctanesulfonamide (PFOSA)	33.74	5.0	32	0	105	67-137	0			
Perfluorooctanesulfonic Acid (PFOS)	26.75	2.0	29.7	0	90.1	65-140	0			
Perfluorooctanoic Acid (PFOA)	34.63	2.0	32	0	108	71-133	0			
Perfluoropentanesulfonic Acid (PFPeS)	27.16	5.0	30	0	90.5	71-127	0			
Perfluoropentanoic Acid (PFPeA)	36.59	5.0	32	0	114	72-129	0			
Perfluorotetradecanoic Acid (PFTeA)	32.29	5.0	32	0	101	71-132	0			
Perfluorotridecanoic Acid (PFTriA)	34	5.0	32	0	106	65-144	0			
Perfluoroundecanoic Acid (PFUnA)	31.52	5.0	32	0	98.5	69-133	0			
N-ethylperfluoro-1-octanesulfonamide	31.95	5.0	32	0	99.8	70-130	0			
N-Ethylperfluorooctanesulfonamidoacet	40.9	5.0	32	0	128	61-135	0			
N-Ethylperfluorooctanesulfonamidoeth	36.8	5.0	32	0	115	70-130	0			
N-methylperfluoro-1-octanesulfonamid	30.74	5.0	32	0	96.1	70-130	0			
N-Methylperfluorooctanesulfonamidoac	33.34	5.0	32	0	104	65-136	0			
N-Methylperfluorooctanesulfonamidoet	29.15	5.0	32	0	91.1	68-141	0			
Hexafluoropropylene oxide dimer acid	36.98	5.0	32	0	116	70-130	0			
4,8-Dioxa-3H-perfluorononanoic Acid (	24.72	5.0	30.1	0	82.1	70-130	0			
11Cl-PF3OUdS	27.4	5.0	30.1	0	91	70-130	0			
9Cl-PF3ONS	27.99	5.0	29.8	0	93.9	70-130	0			
Surf: 13C2-FtS 4:2	144.4	0	149.4	0	96.6	50-150	0			
Surf: 13C2-FtS 6:2	145.1	0	152	0	95.5	50-150	0			
Surf: 13C2-FtS 8:2	148.2	0	153.3	0	96.7	50-150	0			
Surf: 13C2-PFDA	174.6	0	160	0	109	50-150	0			
Surf: 13C2-PFDoA	152.9	0	160	0	95.6	50-150	0			
Surf: 13C2-PFHxA	156.3	0	160	0	97.7	50-150	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010	Instrument ID LCMS1	Method: E537 Mod					
Surr: 13C2-PFHxDA	151	0	160	0	94.4	50-150	0
Surr: 13C2-PFTeA	162.9	0	160	0	102	50-150	0
Surr: 13C2-PFUnA	151.4	0	160	0	94.6	50-150	0
Surr: 13C3-HFPO-DA	137.1	0	160	0	85.7	50-150	0
Surr: 13C3-PFBS	133.7	0	148.8	0	89.9	50-150	0
Surr: 13C4-PFBA	161.7	0	160	0	101	50-150	0
Surr: 13C4-PFHpA	125.9	0	160	0	78.7	50-150	0
Surr: 13C4-PFOA	161	0	160	0	101	50-150	0
Surr: 13C4-PFOS	154	0	152.8	0	101	50-150	0
Surr: 13C5-PFNA	165.1	0	160	0	103	50-150	0
Surr: 13C5-PFPeA	144.9	0	160	0	90.6	50-150	0
Surr: 13C8-FOSA	117.8	0	160	0	73.6	50-150	0
Surr: 18Q2-PFHxS	139.4	0	151.2	0	92.2	50-150	0
Surr: d5-N-EtFOSA	122.9	0	160	0	76.8	50-150	0
Surr: d5-N-EtFOSAA	127.5	0	160	0	79.7	50-150	0
Surr: d9-N-EtFOSE	129.4	0	160	0	80.9	50-150	0
Surr: d3-N-MeFOSA	123.5	0	160	0	77.2	50-150	0
Surr: d3-N-MeFOSAA	137	0	160	0	85.6	50-150	0
Surr: d7-N-MeFOSE	159.4	0	160	0	99.7	50-150	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010 Instrument ID: LCMS1 Method: E637 Mod

MS		Sample ID: 22032616-01A MS		Units: ng/L		Analysis Date: 4/4/2022 06:48 PM				
Client ID:		Run ID: LCMS1: 22040010		SeqNo: 8298128		Prep Date: 4/1/2022		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid 4:2 (FIS)	31.01	4.7	27.99	0	111	63-143	0			
Fluorotelomer Sulphonic Acid 6:2 (FIS)	29.51	4.7	28.3	1.077	100	64-140	0			
Fluorotelomer Sulphonic Acid 8:2 (FIS)	35.82	4.7	28.67	0	125	67-138	0			
Fluorotelomer Sulphonic Acid 10:2 (FIS)	13.76	4.7	28.77	0	47.8	40-160	0			
Perfluorobutanesulfonic Acid (PFBS)	31.18	4.7	26.43	2.981	107	72-130	0			
Perfluorobutanoic Acid (PFBA)	36.76	4.7	29.89	10.56	87.7	73-129	0			
Perfluorodecanesulfonic Acid (PFDS)	24.3	4.7	28.77	0	84.5	53-142	0			
Perfluorodecanoic Acid (PFDA)	29.86	4.7	29.89	0	99.9	71-129	0			
Perfluorododecanesulfonic Acid (PFDoS)	26.11	4.7	28.95	0	90.2	69-134	0			
Perfluorododecanoic Acid (PFDoA)	31.99	4.7	29.89	0	107	72-134	0			
Perfluoroheptanesulfonic Acid (PFHpS)	24.52	4.7	28.49	1.436	81	69-134	0			
Perfluoroheptanoic Acid (PFHpA)	40.47	4.7	29.89	5.011	119	72-130	0			
Perfluorohexadecanoic Acid (PFHxDA)	24.57	4.7	29.89	1.596	76.9	70-130	0			
Perfluorohexanesulfonic Acid (PFHxS)	28.62	4.7	27.18	5.277	85.9	68-131	0			
Perfluorohexanoic Acid (PFHxA)	33.7	4.7	29.89	5.823	93.3	72-129	0			
Perfluorononanesulfonic Acid (PFNS)	26.55	4.7	28.67	0	92.6	69-127	0			
Perfluorononanoic Acid (PFNA)	29.65	4.7	29.89	0	99.2	69-130	0			
Perfluorooctadecanoic Acid (PFODA)	33.15	4.7	29.89	0	111	70-130	0			
Perfluorooctanesulfonamide (PFOSA)	36.02	4.7	29.89	0	121	67-137	0			
Perfluorooctanesulfonic Acid (PFOS)	33.64	1.9	27.74	9.087	88.5	65-140	0			
Perfluorooctanoic Acid (PFOA)	48.19	1.9	29.89	13.24	117	71-133	0			
Perfluoropentanesulfonic Acid (PFPeS)	26.63	4.7	28.02	3.789	81.5	71-127	0			
Perfluoropentanoic Acid (PFPeA)	38.41	4.7	29.89	6.493	107	72-129	0			
Perfluorotetradecanoic Acid (PFTeA)	34.44	4.7	29.89	0	115	71-132	0			
Perfluorotridecanoic Acid (PFTriA)	34.72	4.7	29.89	0	116	65-144	0			
Perfluoroundecanoic Acid (PFUnA)	29.53	4.7	29.89	0	98.8	69-133	0			
N-ethylperfluoro-1-octanesulfonamide	27.31	4.7	29.89	0	91.4	70-130	0			
N-Ethylperfluorooctanesulfonamidoac	35.67	4.7	29.89	0	119	61-135	0			
N-Ethylperfluorooctanesulfonamidoeth	34.61	4.7	29.89	0	116	70-130	0			
N-methylperfluoro-1-octanesulfonamid	34.29	4.7	29.89	0	115	70-130	0			
N-Methylperfluorooctanesulfonamidoa	33.83	4.7	29.89	0	113	65-136	0			
N-Methylperfluorooctanesulfonamidoel	30.7	4.7	29.89	0	103	68-141	0			
Hexafluoropropylene oxide dimer acid	30.68	4.7	29.89	1.303	98.3	70-130	0			
4,8-Dioxa-3H-perfluorononanoic Acid (	19.62	4.7	28.11	0	69.8	70-130	0			S
11Cl-PF3OUdS	24.69	4.7	28.11	0	87.8	70-130	0			
9Cl-PF3ONS	25.48	4.7	27.83	0	91.5	70-130	0			
Sum: 13C2-FIS 4:2	405.3	0	139.6	0	290	50-150	0			S
Sum: 13C2-FIS 6:2	403	0	142	0	284	50-150	0			S
Sum: 13C2-FIS 8:2	242.7	0	143.2	0	170	50-150	0			S
Sum: 13C2-PFDA	156.9	0	149.4	0	105	50-150	0			
Sum: 13C2-PFDoA	139.3	0	149.4	0	93.2	50-150	0			
Sum: 13C2-PFHxA	135.5	0	149.4	0	90.7	50-150	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010	Instrument ID LCMS1	Method: E537 Mod						
Surr: 13C2-PFHxDA	125.4	0	149.4	0	83.9	50-150	0	
Surr: 13C2-PFTeA	119.2	0	149.4	0	79.7	50-150	0	
Surr: 13C2-PFUnA	140.6	0	149.4	0	94.1	50-150	0	
Surr: 13C3-HFPO-DA	115.2	0	149.4	0	77.1	50-150	0	
Surr: 13C3-PFBS	110.2	0	139	0	79.3	50-150	0	
Surr: 13C4-PFBA	141.1	0	149.4	0	94.4	50-150	0	
Surr: 13C4-PFHpA	115.2	0	149.4	0	77.1	50-150	0	
Surr: 13C4-PFOA	141.6	0	149.4	0	94.8	50-150	0	
Surr: 13C4-PFOS	129.1	0	142.7	0	90.5	50-150	0	
Surr: 13C5-PFNA	150.8	0	149.4	0	101	50-150	0	
Surr: 13C5-PFPeA	124.8	0	149.4	0	83.5	50-150	0	
Surr: 13C8-FOSA	100.5	0	149.4	0	67.3	50-150	0	
Surr: 18O2-PFHxS	128.9	0	141.2	0	89.8	50-150	0	
Surr: d5-N-EiFOSA	113.1	0	149.4	0	75.7	50-150	0	
Surr: d5-N-EiFOSAA	133.2	0	149.4	0	89.1	50-150	0	
Surr: d9-N-EiFOSE	111.2	0	149.4	0	74.4	50-150	0	
Surr: d3-N-MeFOSA	111.8	0	149.4	0	74.8	50-150	0	
Surr: d3-N-MeFOSAA	138.7	0	149.4	0	92.8	50-150	0	
Surr: d7-N-MeFOSE	132.3	0	149.4	0	88.5	50-150	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheims Query

QC BATCH REPORT

Batch ID: 194010 Instrument ID: LCMS1 Method: E537 Mod

DUP	Sample ID: 22040010-02A DUP	Units: ng/L	Analysis Date: 4/2/2022 06:20 AM							
Client ID: WDTST-1	Run ID: LCMS1_220401B	Seq No: 8293687	Prep Date: 4/1/2022							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluorotelomer Sulphonic Acid 4:2 (FIS)	ND	4.6	0	0	0	0-0	0.07185	0	30	
Fluorotelomer Sulphonic Acid 6:2 (FIS)	ND	4.6	0	0	0	0-0	0.467	0	30	
Fluorotelomer Sulphonic Acid 8:2 (FIS)	ND	4.6	0	0	0	0-0	0.09281	0	30	
Fluorotelomer Sulphonic Acid 10:2 (FIS)	ND	4.6	0	0	0	0-0	0.1437	0	30	
Perfluorobutanesulfonic Acid (PFBS)	3.292	4.6	0	0	0	0-0	3.428	0	30	J
Perfluorobutanoic Acid (PFBA)	3.566	4.6	0	0	0	0-0	3.389	0	30	J
Perfluorodecanesulfonic Acid (PFDS)	ND	4.6	0	0	0	0-0	0	0	30	
Perfluorodecanoic Acid (PFDA)	ND	4.6	0	0	0	0-0	1.251	0	30	
Perfluorododecanesulfonic Acid (PFDoS)	ND	4.6	0	0	0	0-0	0	0	30	
Perfluorododecanoic Acid (PFDoA)	ND	4.6	0	0	0	0-0	0.09281	0	30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND	4.6	0	0	0	0-0	0	0	30	
Perfluoroheptanoic Acid (PFHpA)	1.396	4.6	0	0	0	0-0	1.5	0	30	J
Perfluorohexadecanoic Acid (PFHxDA)	1.602	4.6	0	0	0	0-0	1.769	0	30	J
Perfluorohexanesulfonic Acid (PFHxS)	1.278	4.6	0	0	0	0-0	1.359	0	30	J
Perfluorohexanoic Acid (PFHxA)	1.902	4.6	0	0	0	0-0	1.991	0	30	J
Perfluorononanesulfonic Acid (PFNS)	ND	4.6	0	0	0	0-0	0	0	30	
Perfluorononanoic Acid (PFNA)	0.8685	4.6	0	0	0	0-0	1.027	0	30	J
Perfluorooctadecanoic Acid (PFODA)	ND	4.6	0	0	0	0-0	0.1407	0	30	
Perfluorooctanesulfonamide (PFOSA)	ND	4.6	0	0	0	0-0	0.0958	0	30	
Perfluorooctanesulfonic Acid (PFOS)	20.68	1.8	0	0	0	0-0	19.48	5.97	30	
Perfluorooctanoic Acid (PFOA)	3.071	1.8	0	0	0	0-0	3.206	4.33	30	
Perfluoropentanesulfonic Acid (PFPeS)	ND	4.6	0	0	0	0-0	0.1467	0	30	
Perfluoropentanoic Acid (PFPeA)	2.688	4.6	0	0	0	0-0	2.856	0	30	J
Perfluorotetradecanoic Acid (PFTeA)	ND	4.6	0	0	0	0-0	0.2365	0	30	
Perfluorotridecanoic Acid (PFTriA)	ND	4.6	0	0	0	0-0	0.05988	0	30	
Perfluoroundecanoic Acid (PFUnA)	ND	4.6	0	0	0	0-0	0.2096	0	30	
N-ethylperfluoro-1-octanesulfonamide	ND	4.6	0	0	0	0-0	0	0	30	
N-Ethylperfluorooctanesulfonamidoacetate	ND	4.6	0	0	0	0-0	0.0988	0	30	
N-Ethylperfluorooctanesulfonamidoethyl	ND	4.6	0	0	0	0-0	0	0	30	
N-methylperfluoro-1-octanesulfonamide	ND	4.6	0	0	0	0-0	0	0	30	
N-Methylperfluorooctanesulfonamidoacetate	ND	4.6	0	0	0	0-0	0.4251	0	30	
N-Methylperfluorooctanesulfonamidoethyl	ND	4.6	0	0	0	0-0	0.1677	0	30	
Hexafluoropropylene oxide dimer acid	ND	4.6	0	0	0	0-0	0	0	30	
4,6-Dioxo-3H-perfluorononanoic Acid (PFON)	ND	4.6	0	0	0	0-0	0.03593	0	30	
11CI-PF30UdS	ND	4.6	0	0	0	0-0	0	0	30	
9CI-PF30NS	ND	4.6	0	0	0	0-0	0	0	30	
Surr. 13C2-FIS 4:2	284.9	0	137.5	0	207	50-150	282.1	0.961	30	S
Surr. 13C2-FIS 6:2	277.7	0	139.8	0	199	50-150	301.9	8.36	30	S
Surr. 13C2-FIS 8:2	219.9	0	141	0	156	50-150	238.6	8.17	30	S
Surr. 13C2-PFDA	157.1	0	147.2	0	107	50-150	162.7	3.49	30	
Surr. 13C2-PFDoA	115.8	0	147.2	0	78.7	50-150	168.2	36.9	30	R
Surr. 13C2-PFHxA	159.8	0	147.2	0	109	50-150	174	8.51	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194010	Instrument ID LCMS1	Method: E537 Mod								
Surr: 13C2-PFHxDA	69.27	0	147.2	0	47.1	50-150	73.14	5.43	30	S
Surr: 13C2-PFTeA	97.92	0	147.2	0	66.5	50-150	104.8	6.81	30	
Surr: 13C2-PFUnA	157.6	0	147.2	0	107	50-150	149.9	5.02	30	
Surr: 13C3-HFPO-DA	110.5	0	147.2	0	75.1	50-150	126.9	13.8	30	
Surr: 13C3-PFBS	126	0	136.9	0	92.1	50-150	130.6	3.58	30	
Surr: 13C4-PFBA	170.7	0	147.2	0	116	50-150	179.8	5.18	30	
Surr: 13C4-PFHpA	138.5	0	147.2	0	94.1	50-150	142.2	2.71	30	
Surr: 13C4-PFOA	172.7	0	147.2	0	117	50-150	170.2	1.42	30	
Surr: 13C4-PFOS	174.8	0	140.6	0	124	50-150	188.9	7.73	30	
Surr: 13C5-PFNA	185.2	0	147.2	0	126	50-150	186	0.415	30	
Surr: 13C5-PFP6A	142	0	147.2	0	96.5	50-150	149.8	5.37	30	
Surr: 13C6-FOSA	108.5	0	147.2	0	73.7	50-150	116.5	7.11	30	
Surr: 18O2-PFHxS	119.3	0	139.1	0	85.8	50-150	124.6	4.3	30	
Surr: d5-N-EiFOSA	126.8	0	147.2	0	86.2	50-150	134	5.47	30	
Surr: d5-N-EiFOSAA	129.7	0	147.2	0	88.1	50-150	124	4.49	30	
Surr: d9-N-EiFOSE	138.3	0	147.2	0	94	50-150	154.8	11.2	30	
Surr: d3-N-MeFOSA	136.9	0	147.2	0	93	50-150	151.4	10	30	
Surr: d3-N-MeFOSAA	154.3	0	147.2	0	105	50-150	164.7	6.53	30	
Surr: d7-N-MeFOSE	112.2	0	147.2	0	76.2	50-150	140.6	22.4	30	

The following samples were analyzed in this batch: 22040010-02A 22040010-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194160 Instrument ID: LCMS1 Method: E537.1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Hexafluoropropylene oxide dimer acid	ND	2.0								
N-Ethylperfluorooctanesulfonamide	ND	2.0								
N-Methylperfluorooctanesulfonamide	ND	2.0								
Perfluorobutanesulfonic Acid (PFBS)	ND	2.0								
Perfluorodecanoic Acid (PFDA)	ND	2.0								
Perfluorododecanoic Acid (PFDoA)	ND	2.0								
Perfluorohéptanoic Acid (PFHpA)	ND	2.0								
Perfluorohexanesulfonic Acid (PFHxS)	ND	2.0								
Perfluorohexanoic Acid (PFHxA)	ND	2.0								
Perfluorononanoic Acid (PFNA)	ND	2.0								
Perfluorooctanesulfonic Acid (PFOS)	ND	2.0								
Perfluorooctanoic Acid (PFOA)	ND	2.0								
Perfluorotetradecanoic Acid (PFTeA)	ND	2.0								
Perfluorotridecanoic Acid (PFTriA)	ND	2.0								
Perfluoroundecanoic Acid (PFUnA)	ND	2.0								
¹¹ C-PI3OUdS	ND	2.0								
⁹ Cl-PF3ONS	ND	2.0								
4,8-Dioxa-3H-perfluorononanoic Acid (	ND	2.0								
Surr: 13C2-PFHxA	44.35	0	40	0	111	70-130	0			
Surr: 13C2-PFDA	38.85	0	40	0	97.1	70-130	0			
Surr: d5-N-EHOSAA	150.3	0	160	0	94	70-130	0			
Surr: 13C3-HFPO-DA	38.33	0	40	0	95.8	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194160 Instrument ID: LCMS1 Method: E537.1

MS2 Sample ID: 22032311-01A-MS2 Units: ng/L Analysis Date: 4/6/2022 10:42 PM
 Client ID: Run ID: LCMS1_220406A SeqNo: 8303272 Prep Date: 4/5/2022 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Hexafluoropropylene-oxide dimer acid	17.05	2.0	19.01	0.07962	89.3	70-130	0			
N-Ethylperfluorooctanesulfonamide	20.65	2.0	19.01	0.05632	108	70-130	0			
N-Methylperfluorooctanesulfonamide	23.41	2.0	19.01	0.3818	121	70-130	0			
Perfluorobutanesulfonic Acid (PFBS)	20	2.0	18.8	4.885	89.9	70-130	0			
Perfluorodecanoic Acid (PFDA)	13.45	2.0	19.01	0.0703	70.4	70-130	0			
Perfluorododecanoic Acid (PFDoA)	18.37	2.0	19.01	0.03651	96.4	70-130	0			
Perfluoroheptanoic Acid (PFHpA)	27.08	2.0	19.01	7.044	105	70-130	0			
Perfluorohexanesulfonic Acid (PFHxS)	79.22	2.0	17.3	57.59	125	70-130	0			
Perfluorohexanoic Acid (PFHxA)	29.96	2.0	19.01	12.24	93.2	70-130	0			
Perfluorononanoic Acid (PFNA)	15.6	2.0	19.01	0.3993	80	70-130	0			
Perfluorooctanesulfonic Acid (PFOS)	136.2	2.0	17.64	121.3	84.3	70-130	0			O
Perfluorooctanoic Acid (PFOA)	23.75	2.0	19.01	6.604	90.2	70-130	0			
Perfluorotetradecanoic Acid (PFTeA)	13	2.0	19.01	0.01126	68.3	70-130	0			S
Perfluorotridecanoic Acid (PFTriA)	13.63	2.0	19.01	0.0233	71.6	70-130	0			
Perfluoroundecanoic Acid (PFUnA)	15.22	2.0	19.01	0.01126	80	70-130	0			
11CI-PF3OUds	12.82	2.0	17.91	0.0167	71.5	70-130	0			
9CI-PF3ONS	12.49	2.0	17.72	0.04777	70.2	70-130	0			
4,8-Dioxa-3H-perfluorononanoic Acid (	16.27	2.0	17.91	0.01476	90.8	70-130	0			
Surr: 13C2-PFHxA	45.46	0	38.02	0	120	70-130	0			
Surr: 13C2-PFDA	37.68	0	38.02	0	99.1	70-130	0			
Surr: d5-N-EFOSAA	113.3	0	152.1	0	74.5	70-130	0			
Surr: 13C3-HFPO-DA	35.92	0	38.02	0	94.5	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194160 Instrument ID LCMS1 Method: E537.1

DUP		Sample ID: 22040010-01A DUP				Units: ng/L		Analysis Date: 4/5/2022 10:58 PM		
Client ID: WDTW-1		Run ID: LCMS1-220406A				SeqNo: 8303274		Prep Date: 4/5/2022		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Héxafluoropropylene oxide dimer acid	ND	2.0	0	0	0		0.02257	0	30	
N-Ethylperfluorooctanesulfonamidoace	ND	2.0	0	0	0		0.04041	0	30	
N-Methylperfluorooctanesulfonamidoac	ND	2.0	0	0	0		0.182	0	30	
Perfluorobutanesulfonic Acid (PFBS)	0.9729	2.0	0	0	0		0.8953	0	30	J
Perfluorodécanoic Acid (PFDA)	ND	2.0	0	0	0		0.02185	0	30	
Perfluorododécanoic Acid (PFDoA)	ND	2.0	0	0	0		0.02585	0	30	
Perfluoroheptanoic Acid (PFHpA)	ND	2.0	0	0	0		0.2239	0	30	
Perfluorohexanesulfonic Acid (PFHxS)	ND	2.0	0	0	0		0.3532	0	30	
Perfluorohexanoic Acid (PFHxA)	ND	2.0	0	0	0		0.4486	0	30	
Perfluorononanoic Acid (PFNA)	ND	2.0	0	0	0		0.04005	0	30	
Perfluorooctanesulfonic Acid (PFOS)	0.6256	2.0	0	0	0		0.7642	0	30	J
Perfluorooctanoic Acid (PFOA)	0.6072	2.0	0	0	0		0.5505	0	30	J
Perfluorotetradécanoic Acid (PFTeA)	ND	2.0	0	0	0		0.01129	0	30	
Perfluorotridecanoic Acid (PFTriA)	ND	2.0	0	0	0		0.01311	0	30	
Perfluoroundecanoic Acid (PFUnA)	ND	2.0	0	0	0		0.03604	0	30	
11Cl-PF3OUdS	ND	2.0	0	0	0		0.01638	0	30	
9Cl-PF3ONS	ND	2.0	0	0	0		0.01092	0	30	
4,8-Dioxa-3H-perfluorononanoic Acid (	ND	2.0	0	0	0		0.0142	0	30	
Sur: 13C2-PFHxA	42.28	0	36.82	0	115	70-130	43.58	3	30	
Sur: 13C2-PFDA	39.29	0	36.82	0	107	70-130	38.95	0.864	30	
Sur: d5-N-EFOSAA	146.5	0	147.3	0	99.4	70-130	154.3	5.24	30	
Sur: 13C3-HFPO-DA	36.78	0	36.82	0	99.9	70-130	37.45	1.8	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Meredith Glazier
 Work Order: 22040010
 Project: Rheems Query

QC BATCH REPORT

Batch ID: 194160 Instrument ID: LCMS1 Method: E537.1

LCS2		Sample ID: LCS2-194160-194160		Units: ng/L		Analysis Date: 4/6/2022 10:25 PM				
Client ID:		Run ID: LCMS1_220406A		SeqNo: 8303270		Prep Date: 4/6/2022 DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Hexafluoropropylene oxide dimer acid	18.75	2.0	20	0	93.8	70-130	0			
N-Ethylperfluorooctanesulfonamide	21.23	2.0	20	0	106	70-130	0			
N-Methylperfluorooctanesulfonamide	24.29	2.0	20	0	121	70-130	0			
Perfluorobutanesulfonic Acid (PFBS)	15.5	2.0	17.68	0	87.7	70-130	0			
Perfluorodecanoic Acid (PFDA)	16.91	2.0	20	0	79.5	70-130	0			
Perfluorododecanoic Acid (PFDoA)	17.44	2.0	20	0	87.2	70-130	0			
Perfluoroheptanoic Acid (PFHpA)	19.85	2.0	20	0	99.3	70-130	0			
Perfluorohexanesulfonic Acid (PFHxS)	16.23	2.0	18.2	0	89.2	70-130	0			
Perfluorohexanoic Acid (PFHxA)	17.85	2.0	20	0	89.2	70-130	0			
Perfluorononanoic Acid (PFNA)	16.37	2.0	20	0	81.9	70-130	0			
Perfluorooctanesulfonic Acid (PFOS)	16.43	2.0	18.56	0	88.5	70-130	0			
Perfluorooctanoic Acid (PFOA)	17.12	2.0	20	0	85.6	70-130	0			
Perfluorotetradecanoic Acid (PFTeA)	14.03	2.0	20	0	70.2	70-130	0			
Perfluorotridecanoic Acid (PFTriA)	14.33	2.0	20	0	71.6	70-130	0			
Perfluoroundecanoic Acid (PFUnA)	15.46	2.0	20	0	77.3	70-130	0			
11Cl-PFOA-dS	14.74	2.0	18.84	0	78.2	70-130	0			
9Cl-PFOA-dS	14.33	2.0	18.54	0	76.9	70-130	0			
4,8-Dioxo-3H-perfluorononanoic Acid	16.85	2.0	18.84	0	89.4	70-130	0			
Sur: 13C2-PFHxA	46.88	0	40	0	117	70-130	0			
Sur: 13C2-PFDA	43.54	0	40	0	109	70-130	0			
Sur: d5-N-EFOSAA	158.8	0	160	0	99.3	70-130	0			
Sur: 13C3-HFPO-DA	39.42	0	40	0	98.6	70-130	0			

The following samples were analyzed in this batch:

22040010-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Chain of Custody Form

ALS Group USA, Corp

Work Order

Parameter/Method Request for Analysts: **EPA 531 / PFAS 91A 531**

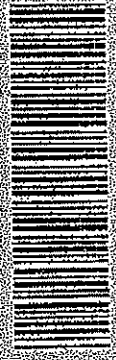
Company Name: **Meredith Glazier** | Invoice Alt#: **Meredith Glazier**

Project Name: **Deems Overm** | Project #: **1793 Beecker Road**

Address: **193 Beecker Road** | City/State/Zip: **Elizabethtown, PA 17022**

Phone: **7173505501** | e-Mail Address: **mercedes@smalle.com**

22040010
 ELJEBK Maxwell Glazier
 Project Name Only



#	Sample Description	Date	Time	Matrix	Preservative	# Bottles	A	B	C	D	E	F	G	H	I	Sample Notes
1	WDTW-1	3/29/22	1630	DW	None	3										
2	WDTSt-1	↓	1645	SW	—	3										
3	WDTSt-2	↓	1700	SW	—	3										
4																
5																
6																
7																
8																
9																
10																

Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Preservative Key: 1-HCL, 2-HNO3, 3-H2SO4, 4-NaOH, 6-H2S2O3, 8-NaHSO4, 7-Other, 8-4 degrees C, 9-5036

Required Turnaround Time: Std 10 Wk days, 5 Wk days, 2 Wk days, 24 hr

Requisitioned by: **Meredith Glazier** | Date: **3/30/22** | Received by: **FedEx** | Date: **3/31/22** | Time: **1630**

Level I: Standard GC | Level II: Std GC # Rev data | Level III: SV9346 CLP-Like | Level IV: SV9346 CLP-Like

Other: **IRI 2.602**

Results Due: _____

Sample Receipt Checklist

Client Name: GLAZIERM

Date/Time Received: 31-Mar-22 16:30

Work Order: 22040010

Received by: LYS

Checklist completed by: Lydia Sweet

01-Apr-22

Reviewed by: Chad Whelton

01-Apr-22

eSignature

Date

eSignature

Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition? Yes No Not Present

Custody seals intact on shipping container/cooler? Yes No Not Present

Custody seals intact on sample bottles? Yes No Not Present

Chain of custody present? Yes No

Chain of custody signed when relinquished and received? Yes No

Chain of custody agrees with sample labels? Yes No

Samples in proper container/bottle? Yes No

Sample containers intact? Yes No

Sufficient sample volume for indicated test? Yes No

All samples received within holding time? Yes No

Container/Temp Blank temperature in compliance? Yes No

Sample(s) received on ice? Yes No

Temperature(s)/Thermometer(s): 2.6/2.6c IR1

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 4/1/2022 8:21:33 AM

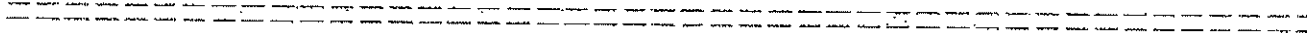
Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:



Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

[Empty text box for comments]

Corrective Action:

[Empty text box for corrective action]

I share the concerns brought forth in the 7/6/2023 Public Comment Document prepared by Neighbors Against Rheems Quarry Expansion for the Rheems Quarry Expansion Major Amendment Permit Submission (existing permit #36080301), West Donegal Twp., Lancaster County, PA

Resident Name, Address, phone number

Meredith Glazier, 793 Bossler Rd, Etown 717-350-5501

Pam Rouse 1610 LAMARIS RD, Mt Joy 717-742-7236

Manopetta S. Seal - 412 Heisey Quarry Rd. Etown - 717-367-179

Julian Richter 429 Foreman Rd. Elizabethtown 717-808-8163

Carl Haas 336 Breckin Rd. Elizabethtown 717-361-8559

Nikki Mason 753 Bossler Rd. Elizabethtown PA 17022 240-405-7484

MEKE MASON 753 BOSSLER RD. E-TOWN PA 17022 240-405-7485

ROBERT A. RECEDORF, 206 COLEBROOK ROAD, ELIZABETHTOWN, PA. 17022

AUDREY STAUFFER 128 SCHOOL LANE, ELIZABETHTOWN, PA. 17022

William Wentling 2259 High St. Elizabethtown PA 17022

Dwain Barton 2269 High St. ELIZABETHTOWN PA 17022

Elaine M. Wentling 2259 High St. Elizabethtown Pa 17022

Cathy A. Hochmeyer 2260 High E-TOWN Pa 17022

Rae Hooking 2260 High St Etown PA 17022

John Broug 443 Foreman Rd, Etown PA 17022

Charlotte Brown 443 Foreman Rd Etown PA 17022

William E. Jodest 15 S Aspen Dr Mount Joy PA 17552

Bern Yodan 15 S Aspen Dr Mount Joy PA 17552

Barbara Read 197 Foreman Rd. E-Town, Pa. 17022 (717) 823-0234

Jim Seal 197 Foreman Rd E-Town, PA 17022 (717) 917-7650

Ben Koser 412 Heisey Quarry Rd E-town, PA 17022 (717)-415-8751

Joe Lisi 412 Heisey Quarry Rd, E-Town, PA 17022

Markemat Greenawald - 122 E. Harrisburg Ave. Elizabethtown, PA 17022 (717) 598-0051

Roger Greenawald - 122 E. Harrisburg Ave. Elizabethtown, PA 17022 (717) 590-5174

Krista Beach - 170 Donegal Dr Etown PA 17022

Bill Beach 170 Donegal Dr Etown PA 17022

I share the concerns brought forth in the 7/6/2023 Public Comment Document prepared by Neighbors Against Rheems Quarry Expansion for the Rheems Quarry Expansion Major Amendment Permit Submission (existing permit #36080301), West Donegal Twp., Lancaster County, PA

Resident Name, Address, phone number

Candlyn J. Riccardi 806 Colebrook Rd Elizabethtown PA
717-367-8197
Monika & Todd 2255 High St. Elizabethtown, PA. (717-951-1609)

Nancy Haas 336 Bosslee Rd. E-Town, Pa 717-951-5446

Steve Hawthorne 1823 Landis Road Mt Jay, Pa 717-572-8771

Aggie Mohr 175 Walnut Dr 717-367-2157

Patricia J Longacker 2094 Turnpike Rd., Elizabethtown, PA 17022
717-367-2405

John Longacker " " " " " "

Ann Fuzgell 127 Donegal Dr. E-town, PA 17022 717-361-7416

Jeff Fuzgell 127 Donegal Dr. E-town, PA 17022 717-361-7416

Rodney Snyder Hwy 224 200 Foreman Road, E-town PA 717 475 8036

Wainy Snyder 200 Foreman Road, E-TOWN PA 717 823 1364

Dante Hickernell 2256 High St. Elizabethtown, 717-367-5704

Red Kersten 1827 Landis Road, Mount Jay, PA 814-442-1566

Douglas Kersten 1827 Landis Road, Mount Jay, PA (724) 816-8081

Avin Mussy 1044 Landis Rd Elizabethtown 717-471-5633

Don Wagner 1066 Landis Rd. Elizabethtown Pa 717 994 1583

Debbie Lamm 218 Colebrook Rd. Elizabethtown 717 572-1179

Sean Burke 300 Foreman Rd. Elizabethtown PA 717-472-0852

Danielle Burke 300 Foreman Rd. Elizabethtown PA 717 808-8603

I share the concerns brought forth in the 7/6/2023 Public Comment Document prepared by Neighbors Against Rheems Quarry Expansion for the Rheems Quarry Expansion Major Amendment Permit Submission (existing permit #36080301), West Donegal Twp., Lancaster County, PA

Resident Name, Address, phone number

Candace Abel, 1610 Landis Road Mount Joy 717-875-8007

John Woods, 2267 High St., Elizabethtown, PA 717-475-6318

Joshua Frizzell 127 Donegal Dr. Rheems/Elizabethtown 717/3617416

Travis Erb 120 E. Harrisburg Ave, Elizabethtown 484-942-0080

Katie Erb 120 E. Harrisburg Av. Elizabethtown 781-541-0249

Chad Crowe 121 E. Libhart Alley RHEEMS, PA 17570 717 475 0444

Dawn Gipe 121 E. Libhart Alley Rheems, Pa 17570

Kristina Woods 2267 High St. Elizabethtown, PA 17022

Andrew Greenwalt 122 E Harrisburg Ave Elizabethtown, PA 17022 717-537-7456

David Greenwalt 122 E Harrisburg Ave Elizabethtown, PA 17022

Paula Leicht 220 Anchor Rd., Elizabethtown, Pa. 17022 717-618-9246

Haskell Sidorof 234 Colebrook Rd Elizabethtown 717-580-3375

John D. Sidorof 230 Colebrook Rd Elizabethtown PA 17022 717-367-3979

CHRYSTAL JULIA WALSH 203 Colebrook Rd Etown PA 17022

CHRIS MARTINEZ 4 FARMINGTON LANE ETOWN PA 17022 717-725-5827

Shari Wolyniuk 1197 Landis Rd Etown 17022 717-367-8915

Joey W. [unclear] 1197 Landis Rd Etown 17022 717-367-8915

I share the concerns brought forth in the 7/6/2023 Public Comment Document prepared by Neighbors Against Rheems Quarry Expansion for the Rheems Quarry Expansion Major Amendment Permit Submission (existing permit #36080301), West Donegal Twp., Lancaster County, PA

Resident Name, Address, phone number

① Jim Jakwer & Barry & Jauber
235 Colebrook Rd
Elizabethtown, PA
17027
717-492-8575

② Betty Lightner
140 E. Harrisburg Ave.
Rheems Pa. 17570
717-347-3944

③ Kathy & ~~Pat~~ Risser
2268 High St.
E-Town, Pa. 17022 (Rheems)
(717) 808-6441 Kathy

④ ~~(717) 900-7067 Pat~~
Pat Risser 2268 High St E-Town, PA
(717) 900-7067 17022

I share the concerns brought forth in the 7/6/2023 Public Comment Document prepared by Neighbors Against Rheems Quarry Expansion for the Rheems Quarry Expansion Major Amendment Permit Submission (existing permit #36080301), West Donegal Twp., Lancaster County, PA

Resident Name, Address, phone number:

⑤ Jeremy Snyder 52 Bassler Rd. 717-653-1308

July 7, 2023

To Whom it may Concern:

We are Don & Marilyn Miller and live at 420 Bossler Rd. Elizabethtown, Pa. The reason for this letter is to address concerns we have related to the proposed Expansion of the Pierson Rheems LLC Quarry.

We have not been opposed to this expansion realizing the need for the raw materials that a quarry provides, and being that there is already a quarry in operation at this site, it only makes sense that they expand since the limestone is there.

That being said, the DEP and Pierson have a significant responsibility to make sure the expansion proceeds safely and within all state and local regulations and with the commitment to do all they can to be a good neighbor in the community around them.

A few concerns we have relating to the quarry and possible expansion:

1. Our neighbors on either side of our property have had well issues within the past year. Each of them have lived at their properties for decades, never having any water issues before this time. Pierson paid all costs for the deepening of their wells. Pierson has contacted us with instructions to notify them if we have any water issues. So far, we have not had any issues. Our heating and cooling system is a geothermal pump and dump heat pump. We draw from one well and return to another well. For this system to operate, we need to have a good strong water supply. Our concern is – if that supply is interrupted, we will have no heat or cooling. Is there something in writing that would require Pierson to cover all the cost of switching to another type of heat system should this happen (as well as covering the cost of the well). Or would they want to pay to switch us to another system now to avoid any future issues. This is of great concern to us and we do not feel we should have to pay for something the quarry caused or might cause. We would request that Pierson be required to put in writing an agreement to this effect, making it an official mandate that they would correct anything caused by water issues due to the operation and expansion of the quarry. Also, we would request this agreement would stay with our property in the case of future sales & transactions of the property. Without this agreement and with the threat of future water issues, our property would lose value to any prospective buyers.
2. Our other area of concern – we would hope that you could address with the quarry the aesthetic impact it has on the community. As residents of this community and township, we are expected to keep our properties tidy and cleaned up so as not to be an eyesore. As the quarry (Pierson) claims to want to be a good neighbor – part of being a good neighbor is doing what they can to keep their property sightly. As far as we can see, they have not done anything to this effect. Many other quarries in the county are at least fenced and have a buffer of trees around the property to give a safer and more sightly appearance to the community. We feel the multi-million-dollar Pierson Company could easily afford to do this and more. This would go a long way toward being a good neighbor within our community.

Thank you so much for your time and for addressing these few requests we have.

Sincerely,
Don and Marilyn Miller
420 Bossler Rd
Elizabethtown, Pa 17022
Phone – (717)475-3465

PS: We'd appreciate a response to these concerns via phone call, letter or an email at mrdmiller81@gmail.com – Thanks!

Stephen M. Cobaugh

231 School LN

Elizabethtown, PA 17022-8111

717-471-5537 | smcobaugh@comcast.net

July 7, 2023

Pennsylvania Department of
Environmental Protection
Pottsville District Office
5 W Laurel Blvd.
Pottsville, PA 17901-2522

Dear DEP:

I would like to hereby voice my opposition to an application to expand quarry operations by R. E. Pierson Materials in West Donegal Township, Lancaster County. I am a 30-year homeowner in the community of Rheems, where the quarry lies, and have a personal vested interest in the outcome of your pending decision.

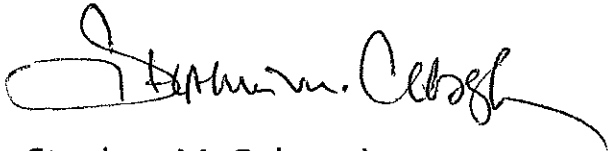
The existing 100-acre quarry abuts -- or is in very close proximity to -- residential streets which have already been negatively impacted by existing quarry operations. These include noise from daily blasting, constant dust pollution, and dry wells from a noticeable drop in the ground water table for some residents not connected to the municipal water supply. Some of my neighbors on adjacent Donegal Drive also report constant cracks in drywall due to the underground shockwave from blasting. The quarry itself is an industrial eyesore, adding to excessive truck traffic through our village and noticeable damage to the surrounding road infrastructure.

Despite considerable public objection from myself and other impacted citizens, West Donegal Township has demonstrated no interest in protecting our environmental rights and quality of life to which we are entitled. The township has taken the ill-advised position that expansion should be permitted because there's existing stone in the new parcel, siding with an out-of-state corporation over local residents and farmers who will be impacted by an additional 30-acre expansion.

Expansion of the existing quarry operations will not only exacerbate existing problems such as fumes and particulate emissions, but also will likely lead to sinkholes and contamination to crops grown in adjacent fields. Additional private wells are also likely to be impacted as well. Furthermore, property values will be diminished for those of us whose life-savings are tied to homeownership.

Lastly, R.E. Pierson Materials Corporation is an unreliable neighbor with a record of regulatory infractions and ongoing legal cases in both Pennsylvania and New Jersey. They have not demonstrated the willingness, capacity or interest in living in harmony with their neighbors and are unworthy of being awarded approval to enact additional blight to our rural landscape.

Cordially,

A handwritten signature in black ink, appearing to read "Stephen M. Cobaugh". The signature is fluid and cursive, with a long horizontal stroke at the end.

Stephen M. Cobaugh

Folk, Tiffany

From: Roger Greenawalt <ramgreenawalt@gmail.com>
Sent: Wednesday, July 12, 2023 12:13 PM
To: Folk, Tiffany
Subject: [External] RE: comment for Rheems quarry expansion

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

This is from Roger Greenawalt 122 East Harrisburg avenue Elizabethtown Pa
717-940-5174

I am writing to make a comment about the expansion of Rheems quarry. I was originally completely against the expansion of the quarry but when I heard it is going to the West I was not as opposed to it. Nevertheless I do have quite a few concerns which make me more inclined to be opposed to it again. First of all a year ago I had a sinkhole open up in my front yard close to my house. I found a contractor who specializes in repair sinkholes, got him to repair it and also added an extra cost by having a geologist on site advising and giving a report afterward. It cost me \$2,500. At the time I felt the quarry had some influence on having a sinkhole but had no clue what to do but to pay to get repaired myself.

July 6th 2023 there was a meeting about the expansion of the quarry and that's where I found out that I was close enough to be in the influence of the quarry that they would be required to take care of wells that go dry or sinkholes. I know of two other places in this community that had developed sinkholes last year also not knowing, repaired it themselves. That's what really disturbed me the most why we in the community who live so close are not given information to us for when something like this happens.

The second issue that I have is when they blast it rattles inside our house significantly. I had a number of cracks years ago and I taped and skim coat it over all of them. Since then I have developed more cracks (6) that slowly over time continue to grow.

The third issue I have is with all the dust that we get from the trucks and also from the quarry stone piles themselves. I wish they could control the dust better when the trucks leave. The other problem is when it gets really windy before a storm the piles produce a huge dust storm that comes through Rheems. I realize that the quarry is not the only culprit, I wish Wenger feedmill would do a better job with dust control. I feel like with their operation my property is being affected, devalued and it has cost me yet they don't reach out to us in the community or seem to care.

Thank you, Roger Greenawalt

Sent from Yahoo Mail on Android

On Tue, Jul 11, 2023 at 10:14 AM, Folk, Tiffany<tfolk@pa.gov> wrote:
Complaint number 570-621-3118. Ask to file a complaint.

Tiffany M. Folk, P.G. | Licensed Professional Geologist

Department of Environmental Protection

Pottsville District Mining Office

5 West Laurel Boulevard | Pottsville, PA 17901

Phone: 570.621.3118 | Fax: 570.621.3110
www.dep.pa.gov

PRIVILEGED AND CONFIDENTIAL COMMUNICATION

The information transmitted is intended only for the person or entity to whom it is addressed and may contain confidential and/or privileged material. Any use of this information other than by the intended recipient is prohibited. If you receive this message in error, please send a reply e-mail to the sender and delete the material from any and all computers. Unintended transmissions shall not constitute waiver of the attorney-client or any other privilege.

From: Roger Greenawalt <ramgreenawalt@gmail.com>
Sent: Friday, July 7, 2023 10:28 AM
To: Folk, Tiffany <tfolk@pa.gov>
Subject: [External] Receipt__from_SM_Johns__Son_ConstructionLLC.pdf

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use theReport Phishing button in Outlook.

Here's the receipt

Get BlueMail for Android

Folk, Tiffany

From: EP, PottsvilleDMO
Sent: Friday, March 8, 2024 8:29 AM
To: Aimee Achorn; EP, PottsvilleDMO
Cc: Folk, Tiffany
Subject: RE: [External] Objection to Pierson Quarry Expansion

Thank you for your comments. They will be included as part of the public record for this permit application.

If you have additional questions or concerns, please contact our permit chief, Tiffany Folk (cc'd).

Sincerely,

-Mike

Michael Kutney, P.G. | District Mining Manager
Department of Environmental Protection
Pottsville District Mining Office
5 West Laurel Boulevard | Pottsville, PA 17901
Phone: 570.621.3118 | Fax: 570.621.3110
www.dep.pa.gov

PRIVILEGED AND CONFIDENTIAL COMMUNICATION

The information transmitted is intended only for the person or entity to whom it is addressed and may contain confidential and/or privileged material. Any use of this information other than by the intended recipient is prohibited. If you receive this message in error, please send a reply e-mail to the sender and delete the material from any and all computers. Unintended transmissions shall not constitute waiver of the attorney-client or any other privilege.

From: Aimee Achorn <aachorn@yahoo.com>
Sent: Thursday, March 7, 2024 11:56 PM
To: EP, PottsvilleDMO <RA-EPPOTTSVILLEDMO@pa.gov>
Subject: [External] Objection to Pierson Quarry Expansion

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

To Whom It May Concern:

I am writing to express my strong objection to the expansion of the Pierson Quarry in Rheems, Lancaster County.

Thank you to those representatives of the Department of Environmental Protection who attended the public hearing in February at the Rheems Fire House. You were witness to the concerns of those who packed the room that night, over 60 residents and friends who represented a unanimous belief that a Pierson Quarry expansion would have deeply negative effects on residents, their resources and the local community. You heard the reports of the pollution and destruction of home-owners' water sources, cracks in the walls and foundations of their homes, and air and sound pollution. You heard them anticipate the potential effects of pollution on local farms and express their fears about the impact on property values.

Speakers at the hearing outlined the scientific basis for the Rheems community's arguments against the expansion of the Pierson Quarry. I'm writing to you about the responsibility of local and state authorities to be powerful and farsighted stewards of what makes Pennsylvania great. Lancaster County is home to some of the best farmland in the world, and more importantly, farm culture. Farmers dedicate their lives to planting, tending, nurturing, growing, stewarding and renewing. Their commitment means that when we are enjoying family and fun on Labor Day, they are laboring in their fields. This ethic is an important part of our identity and our success in the Keystone State. And I know I can speak for many Lancastrians when I say that I wouldn't live anywhere else because of this very special culture. I have traveled the roads through the farmland that surrounds Rheems since I was a child in the 70s, and I know -- many of us know -- that this is God's country.

I grew up surrounded by this precious farmland south of Elizabethtown and attended Rheems Elementary School. The original owners of the quarry were so committed to the welfare of their community that they built their home right above it. They maintained some of the local roads when the tiny little township couldn't afford to do it themselves. On a personal level, when my parents were newlyweds and didn't have two dimes to rub together, they brought them fresh vegetables they had grown in their garden. My father spent summers in College in the 1950s working for them digging ditches and transporting stone to build local roads, and they had a strong mutual respect all their lives.

I see a stark contrast with Pierson Quarry. They are headquartered in New Jersey with most of their business interests also in New Jersey. They don't have a personal stake in this community. This has been made clear by the challenges that Rheems residents have already experienced securing commitments and follow-through from Pierson to correct problems caused by their blasting. And the quarry hasn't even expanded yet.

I wonder about some of the community impact that hasn't been explored in detail. I wonder about the impact on school children and Rheems nursing home residents of the constant blasting in 30 fresh acres of quarry, the edge of which is visible from the Catherine Hershey School playground. I wonder about the impact of this fresh blasting on the 300-year old Donegal Presbyterian Church, which is already only 3 miles south of the quarry. It will be even closer if the quarry expands. I wonder what these good, hardworking people will do if their property values plummet. And I wonder what sort of regional health crisis might take place if the expansion has unexpected consequences that pollute nearby farm products.

Over the course of the past few years, Rheems residents have worked diligently to understand the situation at hand and to voice their concerns to their local representatives. Their local representatives largely ignored them. Now, the community is looking to you -- our state-level leaders who protect the health and safety of our environment -- for help.

I live in Palmyra now, but have remained aware and involved because I will always view the Elizabethtown area as my home. There are many more eyes on this issue than just those of the small population of Rheems. We are hopeful that your expertise will help place the community on a better path. Please stand up for the interests of the people of the village of Rheems. Their concerns and positions are clear. Please protect the health and welfare of these local residents and the farmland that is crying out to be preserved. Please do your best to nurture and renew this wonderful, hard-working, tax-paying community.

Sincerely,
Aimee Achorn Fasnacht
Palmyra, Pennsylvania

Folk, Tiffany

From: Evelyn Audi Lisi <eaudilisi@gmail.com>
Sent: Tuesday, March 5, 2024 11:18 AM
To: Folk, Tiffany
Subject: [External] Permit Denial Request Public Comment: re Pierson Rheems, LLC mining permit request

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

Evelyn A. Lisi
1021 Louise Avenue
Lancaster, PA
17601

March 5, 2024

Department of Environmental Protection
Pottsville Mining Office
5 West Pottsville, PA 17901

Dear Tiffany Folk,

I am writing to express extreme concern regarding the pending application for Pierson Rheems LLC to increase mining through a permit that would increase the mining area by 29.58 acres to 132.22 acres.

We are concerned for the water table as two homeowners on Bossler road and previously on Foreman road adjacent to the quarry have had wells go dry. Significantly, forever chemicals (PFAS, PFOA, e.g.) were detected in surface waters around the quarry. We can expect these will migrate to private water supplies as the quarry dewateres 2-3 million gallons per day as requested in their permit application.

We view water supply and contamination as environmental threats not only but certainly consistent with threats to individual people and families surrounding the quarry.

We urge you to deny the application for Pierson Rheems to increase mining.

Thank you for your consideration,

Evelyn A. Lisi

Lancaster, PA



Virus-free.www.avast.com

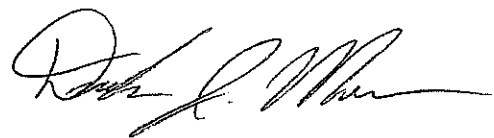
Derek Moore & Katie Moore
34 Bosster Road
Elizabethtown, PA 17022

To whom it may concern,

I am writing as a recent newcomer to the Rheems area. The expansion of the Rheems quarry is definitely a concern shared by my wife and I. The testimony shared by other residents at the township meeting last year gives us much anxiety that our investment in purchasing our home and then expanding it to add an accessory dwelling unit for my mother-in-law will be fraught with many setbacks as a result of damage to the property from the quarry's operations moving closer to our property.

The aforementioned township meeting was very heavily attended, to the point that I had to stand outside of the meeting room. It was quite clear that the local population was very much in opposition to the quarry's expansion, yet the township decided to approve the re-zoning that was debated that evening. It is a concern that local government, designed to reflect the will of its populace, chose to support an outside entity, R. E. Pearson. We hope that the Department of Environmental Protection's permit review process will properly identify the issues that the expansion of mining operations will cause to local homeowners.

Thank you for your time.



cc: Tiff
Randy
Ross
Tony

Public Comments on Rheems Quarry Expansion, July 14, 2023

Bad air days in Lancaster County have moved from occasional to daily.

Our northwest corridor has absorbed a multitude of industrial pollutants from Brunner's Island over 60 years., compounded by the incinerator (500 tons NOCs/yr.) and Perdue's soy bean crushing plant, (100 tons of neurotoxin hexane) Our bad air has led Delaware and Connecticut to petition the EPA to require effective air controls at power plants and reduce emissions affecting their states. DEP has permitted air quality credits from a defunct NY plant to be applied to the soybean plant, substituting air pollution from one area to another, a profitable industry practice. Political decisions serve to worsen air quality for a population already at risk. The American Lung Association's warnings of grade F for particle pollution serves as a warning for regulatory state agencies to address these serious threats to the public's health.

Our Pennsylvania Constitution Article 1, enables Pennsylvania citizens to clean air and pure water. "As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

Our state has the opportunity to reduce effects on both issues and commit to making residents' welfare and well being priority in denying any expansion of the Rheems Quarry. The physical threats are obvious; groundwater contamination, structural damage to tax paying residents' homes, dust pollutant emissions, etc. The town of Rheems needs government to respect their property rights, not award them with mitigation repair systems after damage has denied them fair market price on their investments.

Submitted by Patricia J. Longenecker, 2094 Turnpike Rd., Elizabethtown, PA 17022, 717-367-2405, West Donegal Township



