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 (Foose, 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 ½ 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 Buidling.

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.
- CETCO 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 dewaters. 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 wasnt 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 in 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 know 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 charges 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 activites 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-axles 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 PM2.5 and has close to the worst air quality in PA and fails nationally every year, actually getting worse each year for PM2.5. 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 activites. 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 Bossler 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 ½ mile radius to go dry (Foose, 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.

ALS Environmental

12-Apr-2022

Meredith Glazier
Meredith Glazier
793 Bossler Road
Elizabethtown, PA 17022

Re: **Rheems 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

Date: 12-Apr-22

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

Work Order Sample Summary

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

Client:	Meredith Glazier
Project:	Rheems 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

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

Qualifier	Description
*	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.

Acronym	Description
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

Units Reported	Description
ng/L	Nanograms per Liter

ALS Group, USA

Date: *12-Apr-2022*

Client: Meredith Glazier
Project: Rheems Query
Sample ID: WDTW-1
Collection Date: 3/29/2022 04:30 PM

Work Order: 22040010
Lab ID: 22040010-01
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
11Cl-Pf3OUdS	ND		2	ng/L	1	4/6/2022 11:06 PM
9Cl-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-EtFOSAA	*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.

Client: Meredith Glazier
Project: Rheems Query
Sample ID: WDTS(-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 (FtS 4:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.7	ng/L	1	4/2/2022 06:29 AM
Fluorotelomer Sulphonic Acid 10:2 (FtS 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-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-PF3ONS	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-PFDoA	*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-PFHxDA	*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.

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 (FtS 4:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND		4.7	ng/L	1	4/2/2022 08:42 AM
Fluorotelomer Sulphonic Acid 10:2 (FtS 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: 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
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-FtS 4:2	*164*	S	*50-150*	*%REC*	1	4/2/2022 08:42 AM
Surr: 13C2-FtS 6:2	*170*	S	*50-150*	*%REC*	1	4/2/2022 08:42 AM
Surr: 13C2-FtS 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

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

Date: 12-Apr-22

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 (Ft	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 (PFDc	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								
Perfluorononanesulfonic Acid (PFNS)	ND	5.0								
Perfluorononanoic 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-Ethylperfluorooctanesulfonamidoace	ND	5.0								
N-Ethylperfluorooctanesulfonamidoeth	ND	5.0								
N-methylperfluoro-1-octanesulfonamid	ND	5.0								
N-Methylperfluorooctanesulfonamidoa	ND	5.0								
N-Methylperfluorooctanesulfonamidoet	ND	5.0								
Hexafluoropropylene oxide dimer acid	ND	5.0								
4,8-Dioxa-3H-perfluorononanoic Acid (	ND	5.0								
11Cl-Pf3OUdS	ND	5.0								
9Cl-PF3ONS	ND	5.0								
Surr: 13C2-FtS 4:2	*144.4*	0	*149.4*	0	*96.6*	*50-150*	0			
Surr: 13C2-FtS 6:2	*144.8*	0	*152*	0	*95.3*	*50-150*	0			
Surr: 13C2-FtS 8:2	*146.9*	0	*153.3*	0	*95.9*	*50-150*	0			
Surr: 13C2-PFDA	*164.3*	0	*160*	0	*103*	*50-150*	0			
Surr: 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: **E537 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-EtFOSA	*121*	0	*160*	0	*75.6*	*50-150*	0
Surr: d5-N-EtFOSAA	*120.4*	0	*160*	0	*75.2*	*50-150*	0
Surr: d9-N-EtFOSE	*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 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	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 (Ft	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-Ethylperfluorooctanesulfonamidoace	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-Methylperfluorooctanesulfonamidoa	33.34	5.0	32	0	104	65-136	0			
N-Methylperfluorooctanesulfonamidoe	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			
Surr: 13C2-FtS 4:2	*144.4*	0	*149.4*	0	*96.6*	*50-150*	0			
Surr: 13C2-FtS 6:2	*145.1*	0	*152*	0	*95.5*	*50-150*	0			
Surr: 13C2-FtS 8:2	*148.2*	0	*153.3*	0	*96.7*	*50-150*	0			
Surr: 13C2-PFDA	*174.6*	0	*160*	0	*109*	*50-150*	0			
Surr: 13C2-PFDoA	*152.9*	0	*160*	0	*95.6*	*50-150*	0			
Surr: 13C2-PFHxA	*156.3*	0	*160*	0	*97.7*	*50-150*	0			

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

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: 18O2-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: **E537 Mod**

MS Sample ID: **22032616-01A MS** Units: ng/L Analysis Date: **4/4/2022 06:48 PM**
Client ID: Run ID: **LCMS1_220404B** SeqNo: **8298126** 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	31.01	4.7	27.93	0	111	63-143	0			
Fluorotelomer Sulphonic Acid 6:2 (FtS	29.51	4.7	28.3	1.077	100	64-140	0			
Fluorotelomer Sulphonic Acid 8:2 (FtS	35.82	4.7	28.67	0	125	67-138	0			
Fluorotelomer Sulphonic Acid 10:2 (Ft	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 (PFDc	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 (PFTrA)	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-Ethylperfluorooctanesulfonamidoace	35.57	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-Methylperfluorooctanesulfonamidoet	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			
Surr: 13C2-FtS 4:2	*405.3*	0	*139.6*	0	*290*	*50-150*	0			*S*
Surr: 13C2-FtS 6:2	*403*	0	*142*	0	*284*	*50-150*	0			*S*
Surr: 13C2-FtS 8:2	*242.7*	0	*143.2*	0	*170*	*50-150*	0			*S*
Surr: 13C2-PFDA	*156.9*	0	*149.4*	0	*105*	*50-150*	0			
Surr: 13C2-PFDoA	*139.3*	0	*149.4*	0	*93.2*	*50-150*	0			
Surr: 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	*126.9*	0	*141.2*	0	*89.8*	*50-150*	0
Surr: d5-N-EtFOSA	*113.1*	0	*149.4*	0	*75.7*	*50-150*	0
Surr: d5-N-EtFOSAA	*133.2*	0	*149.4*	0	*89.1*	*50-150*	0
Surr: d9-N-EtFOSE	*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: Rheems 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 SeqNo: 8293687 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	4.6	0	0	0	0-0	0.07185	0	30	
Fluorotelomer Sulphonic Acid 6:2 (FtS	ND	4.6	0	0	0	0-0	0.467	0	30	
Fluorotelomer Sulphonic Acid 8:2 (FtS	ND	4.6	0	0	0	0-0	0.09281	0	30	
Fluorotelomer Sulphonic Acid 10:2 (Ft	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)	3.556	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 (PFDc	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-Ethylperfluorooctanesulfonamidoace	ND	4.6	0	0	0	0-0	0.0988	0	30	
N-Ethylperfluorooctanesulfonamidoeth	ND	4.6	0	0	0	0-0	0	0	30	
N-methylperfluoro-1-octanesulfonamid	ND	4.6	0	0	0	0-0	0	0	30	
N-Methylperfluorooctanesulfonamidoa	ND	4.6	0	0	0	0-0	0.4251	0	30	
N-Methylperfluorooctanesulfonamidoet	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	
4,8-Dioxa-3H-perfluorononanoic Acid (	ND	4.6	0	0	0	0-0	0.03593	0	30	
11Cl-Pf3OUdS	ND	4.6	0	0	0	0-0	0	0	30	
9Cl-PF3ONS	ND	4.6	0	0	0	0-0	0	0	30	
Surr: 13C2-FtS 4:2	*284.9*	0	*137.5*	0	*207*	*50-150*	282.1	*0.961*	*30*	*S*
Surr: 13C2-FtS 6:2	*277.7*	0	*139.8*	0	*199*	*50-150*	301.9	*8.36*	*30*	*S*
Surr: 13C2-FtS 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-PFPeA	*142*	0	*147.2*	0	*96.5*	*50-150*	149.8	*5.37*	*30*	
Surr: 13C8-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-EtFOSA	*126.8*	0	*147.2*	0	*86.2*	*50-150*	134	*5.47*	*30*	
Surr: d5-N-EtFOSAA	*129.7*	0	*147.2*	0	*88.1*	*50-150*	124	*4.49*	*30*	
Surr: d9-N-EtFOSE	*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**

MBLK Sample ID: **MBLK-194160-194160** Units: **ng/L** Analysis Date: **4/6/2022 10:17 PM**
Client ID: Run ID: **LCMS1_220406A** SeqNo: **8303269** 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	ND	2.0								
N-Ethylperfluorooctanesulfonamidoace	ND	2.0								
N-Methylperfluorooctanesulfonamidoa	ND	2.0								
Perfluorobutanesulfonic Acid (PFBS)	ND	2.0								
Perfluorodecanoic Acid (PFDA)	ND	2.0								
Perfluorododecanoic Acid (PFDoA)	ND	2.0								
Perfluoroheptanoic 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								
11Cl-Pf3OUdS	ND	2.0								
9Cl-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-EtFOSAA	*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-Ethylperfluorooctanesulfonamidoace	20.65	2.0	19.01	0.05632	108	70-130	0			
N-Methylperfluorooctanesulfonamidoa	23.41	2.0	19.01	0.3818	121	70-130	0			
Perfluorobutanesulfonic Acid (PFBS)	20	2.0	16.8	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 (PFTrA)	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			
11Cl-Pf3OUdS	12.82	2.0	17.91	0.0167	71.5	70-130	0			
9Cl-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-EtFOSAA	*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: **4/6/2022 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
Hexafluoropropylene 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-Methylperfluorooctanesulfonamidoa	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
Perfluorodecanoic Acid (PFDA)	ND	2.0	0	0	0		0.02185	0	30	
Perfluorododecanoic 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
Perfluorotetradecanoic 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	
Surr: 13C2-PFHxA	*42.28*	0	*36.82*	0	*115*	*70-130*	43.56	*3*	*30*	
Surr: 13C2-PFDA	*39.29*	0	*36.82*	0	*107*	*70-130*	38.95	*0.864*	*30*	
Surr: d5-N-EtFOSAA	*146.5*	0	*147.3*	0	*99.4*	*70-130*	154.3	*5.24*	*30*	
Surr: 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: **4/5/2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Hexafluoropropylene oxide dimer acid	18.75	2.0	20	0	93.8	70-130	0			
N-Ethylperfluorooctanesulfonamidoace	21.23	2.0	20	0	106	70-130	0			
N-Methylperfluorooctanesulfonamidoa	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)	15.91	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-Pf3OUdS	14.74	2.0	18.84	0	78.2	70-130	0			
9Cl-PF3ONS	14.33	2.0	18.64	0	76.9	70-130	0			
4,8-Dioxa-3H-perfluorononanoic Acid (	16.85	2.0	18.84	0	89.4	70-130	0			
Surr: 13C2-PFHxA	*46.88*	0	*40*	0	*117*	*70-130*	0			
Surr: 13C2-PFDA	*43.54*	0	*40*	0	*109*	*70-130*	0			
Surr: d5-N-EtFOSAA	*158.8*	0	*160*	0	*99.3*	*70-130*	0			
Surr: 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

Company Name	Meredith Glazier	Purchase Order		Parameter/Method Request for Analysis	
		Company Name	Meredith Glazier	A	PFAS EPA 537 / [illegible]
Send Report To	Meredith Glazier	Invoice Attn	Meredith Glazier	B	PFAS EPA 537.1
Project Name	Rheems Quarry	Project #		C	
Address	793 Bossler Road	Address	793 Bossler Road	D	
				E	
				F	
City State Zip	Elizabethtown, PA 17022	City State Zip	Elizabethtown, PA 17022	G	
Phone	7173505501	Phone	7173505501	H	
e-Mail Address	meresyge@gmail.com	e-Mail Address		I	
				J	

22040010

GLAZIERM: Meredith Glazier
Project: Rheems Quarry

#	Sample Description	Date	Time	Matrix	Preservative	# Bottles	A	B	C	D	E	F	G	H	I	J	Sample Notes
1	WDTW-1	3/29/22	1630	DW	Thiosulfate	3	✓	1									
2	WDTSt-1	↓	1645	SW	—	3	1										
3	WDTSt-2	↓	1700	SW	—	3	1										
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-Na2S2O3 8-NaHSO4 7-Other 8-4 degrees C 9-5035

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

Results Due:

Relinquished by	Date	Time	Received by	Date	Time
Meredith	3/30/22		FedEx		
FedEx	3/31/22	1630			

NOTES:
IR1 2.6°C

QC Reporting Level: (check box below)

- Level II: Standard QC
- Level III: Std QC + Raw data
- Level IV: SW846 CLP-Like

Other:

ALS Group USA, Corp | 3352 128th Ave | | Holland, Michigan 49424 | TEL. (616) 399-6070

ALS Group, USA

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 (eSignature) 01-Apr-22 (Date) Reviewed by: Chad Whelton (eSignature) 01-Apr-22 (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:

CorrectiveAction:

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

Paul Rouse 1610 Lamois Rd, Mt Joy 717-742-7236

Margaretta S. Lisi - 412 Heisey Quarry Rd. E-town, - 717-367-179

Julian Richter 429 Foreman Rd. Elizabethtown 717-808-81[illegible]3

Carl Haas 336 Bossler Rd. Elizabethtown 717.361-555[illegible]

Nikki Mason 753 Bossler Rd. Elizabethtown PA 17022 240.405.7484

Mike 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

Donna L Barton 2264 High St Elizabethtown PA 17022

Elaine M. Wentling 2259 High St. Elizabethtown Pa 17022

Betsy A. Hockenberry 2260 High E-TOWN Pa 17022

Ron Hockenberry 2260 High St E-town PA 17022

John Brough 443 Foreman Rd, E-town PA 17022

Charlotte Brown 443 Foreman Rd Etown PA 17022

Irvin E Yoder III 15 S Aspen Dr Mount Joy PA 17552

Ben Yoder 15 S Aspen Dr Mount Joy PA 17552

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

Jim Read 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

Montserrat Greenawalt - 122 E. Harrisburg Ave, Elizabethtown, PA 17022 (717) 598-0051

Roger Greenawalt - 122 E. Harrisburg Ave. Elizabethtown, PA 17022 (717) 940-5174

Krista Beach - 170 Donegal Dr E town PA 17022

Bill Beach 170 Donegal Dr E-town 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

Carolyn J. Riccardi 806 Colebrook Rd Elizabethtown PA 717-367-8197
Monika & Rolf 2255 High St. Elizabethtown, PA. (717-951-1607)
Nancy Haas 336 Bossler Rd. E-Town, Pa 717951.5446
Steve Hawthorne 1803 Landis Road Mt Jy. Pa 717-572-8777
[illegible] 695 Donegal Dr 717-367-2157
Patricia J Longenecker 2094 Turnpike Rd., Elizabethtown, PA 17022
717-367-2405
John P Longenecker
Dawn Fitzgell 127 Donegal Dr. E-town, PA 17022 717-361-7416
Jeff Fitzgell 127 Donegal Dr. Etown, PA 17022 717-361-7416
Rodney Snyder 200 Foreman Road, Etown PA 717 475 8036
Haine Snyder 200 FOREMAN ROAD, E-TOWN PA 7178231364
Brenda Hickernell 2256 High St. Elizabethtown, 717-367-5704
Ryan Kersten 1827 Landis Road, Mount Joy, PA 814-442-1566
Douglas Kersten 1827 Landis Road, Mount Joy, PA (724)816-8081
Kevin Musser 1044 Landis RD Elizabethtown 717-471-5633
[illegible] 1066 Landis Rd. Elizabethtown PA 717 994 1583
Debbie Lennon 218 Colebrook Rd. Elizabethtown 717 572-1179
Sean Burke 3116 Foreman Rd. Elizabethtown PA 717-742-0852
Danielle Burke 366 Foreman Rd. Elizabethtown PA 717 808-8643

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 717/361/7416

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. Libart Alley Rheems, PA 17570

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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

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Resident Name, Address, phone number

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