January 13, 2020

1190 West State Street
Archbald, PA 18403

Pioneer Aggregates (AKA: Simpson Stone Quarry)
Fell Township, Lackawanna County, Pennsylvania

Department of Environmental Protection  Fell Township Supervisors
Attn: Mr. Roger Bellas, Bureau Waste Management  Attn: Mr. Andy Goret
2 Public Square  1 Veterans Road
Wilkes-Barre, PA 18701  Carbondale, PA 18407

Dear Sirs:

The following public comment are provided for response and action regarding the proposed processing permit (or other type permit) for the Pioneer Aggregates site located in Fell Township Pennsylvania. These comments would also be relevant to potential additional actions at permitted and proposed landfills and other existing and proposed “beneficial reuse” sites not limited to former quarries and mine sites. Although this correspondence may be premature as there has been no permit submission at this point in time subsequent to the pilot project, it would seem appropriate as some of these recommendations should be considered and implemented as soon as possible prior to any permit approvals. These recommendations should also be considered for incorporation into local zoning and “clean fill” policies.

**BASELINE MONITORING**

The lack of current data on the site-specific groundwater quality would warrant an adequate “baseline groundwater and surface water monitoring program” to define pre-operational conditions prior to the full scale permit approval. As stabilized construction and demolition (C&D wastes) wastes have already been disposed of in the quarry during the pilot program, this would warrant enough monitoring wells to characterize (1) groundwater flow conditions horizontally and vertically, and (2) defining baseline utilizing “background monitoring wells” and “downgradient wells” if proven to be statistically similar to the “background monitoring wells. The wells should be adequately constructed “monitoring wells” that would be similar in construction to waste management standards. Any existing water supply wells should be monitored if in proximity to the site but not replace the “monitoring wells” for characterization.

The “baseline monitoring” should be sufficient to define both organic and inorganic constituents in the groundwater. The comparison of “background” and “downgradient wells” would provide a statistically valid database of pre-permit conditions. If the “background” and “downgradient” wells show significant differences, then there has already been contamination that would warrant the shift from a “detection monitoring” program to an “assessment monitoring” program.

The baseline database should insure that data from each monitoring period, and for each downgradient well considered for baseline data have adequate statistical techniques to insure no significant outliers
and that the majority of the inorganic parameters fall within the anticipated distribution. This was a significant issue at Hazleton Creek Properties when statistical tests indicated that the basic means used to calculate acceptable permit levels had unacceptable outliers as well as other arguments (Mellow, 2019). Several key documents that also reference additional unaddressed concerns are provided below.

The objective of the above comment would be to adequately characterize the groundwater flow systems horizontally and vertically and define “baseline” groundwater quality conditions subsequent to quarry and pilot program disposal of wastes.

CLEAN FILL

During several public meetings at the Fell Township Municipal Building it appeared that the cement stabilized construction and demolition waste might be considered clean fill. This determination would negate any routine and required monitoring activities. The “clean fill” argument was also made in a former lawsuit against the Department of Environmental Protection (PADEP) and specific employees by Pioneer Aggregates of Laflin, Pennsylvania. The focus appeared to indicate that out-of-state material was taken at another southern Pennsylvania site that had set precedence. Casual telephone discussion with the PADEP Waste Management Central Office had indicated that the definition of “clean fill” would not be satisfied by stabilized construction and demolition wastes. The current definition of clean fill as presented below would also indicate that “clean fill” would not include wastes that are below a regulated Act 2 concentration. However, recent proposed changes to the “fill policy” do indicate that contamination above background may fit the legal definition of “uncontaminated”. This significant revision to the definition of “uncontaminated” may suggest that local zoning establish their own “clean fill” ordinance that explicitly notes “clean fill” as not contaminated above “background concentrations” for site specific contaminants.

"The chemical concentration limits contained in the Management of Fill Policy that are used to determine whether materials are uncontaminated, as that term is defined in the policy, are derived from numerical limits for residential use specified in 25 Pa. Code Chapter 250 (relating to administration of Land Recycling Program). The existing chemical concentration limits were last modified in 2007 and are not consistent with the revisions made in 2011 and 2016 to Chapter 250. The Department is proposing amendments to the Management of Fill Policy to directly reference the applicable limits from 25 Pa. Code Chapter 250, and eliminate Tables FP-1a (organic constituents) and FP-1b (metals and inorganic constituents) from the policy so that future revisions to the numeric limits in Chapter 250 are automatically updated and included in the Management of Fill Policy."

While it would appear that the stabilized wastes that have been placed (up to 90,000 cubic yards) in the Pioneer Aggregates facility in Fell Township would not meet the definition of clean fill, it would be prudent to have this township (and other municipalities) develop their own “clean fill policy” as suggested above to prevent material contaminated above background concentrations used as unmonitored fill. One of the definitions of Construction Demolition wastes reasonably states separated material that would be normally considered “clean fill” but continue research on the inclusion of the definition of “uncontaminated” in proposed zoning.
"Clean fill—Uncontaminated, nonwater-soluble, nondecomposable inert solid material used to level an area or bring the area to grade. The term does not include material placed into or on waters of this Commonwealth.”

There has also been a Bill that has passed the Pennsylvania House that would redefine “pollution” v. This Bill would lessen the reporting requirements of “spills” to the Commonwealth and allow contamination to occur without reporting or remedial actions. This Bill has been noted by environmental groups to weaken the enforcement powers of the PADEP and the Pennsylvania Fish and Boat Commission viii. This Bill has been currently referred to the House Environmental Resources and Energy Commission as of June 27, 2019. Note that this change in the definition of “pollution” may have an effect on notification and regulatory response actions at the Fell Township and other sites. Local zoning might consider defining “pollution” consistent with an adequate definition of “contamination”.

Again, it would be important for this and the preceding argument to note that “contaminated” should mean above normal background, not some established advisory level. The residential and other health levels should help define a potential abatement action if needed, but not as a qualifier as “clean fill”. The American Society for Testing and Materials (ASTM) and other federal databases may have additional useful definitions for use in clean fill policies and zoning. One definition for “pollution” was found at the U.S. Environmental Protection System of Registries database that might be useful.

“Definition 1: Under the Clean Water Act, for example, the term has been defined as the man-made or man-induced alteration of the physical, biological, chemical, and radiological integrity of water and other media. [Federal Remediation Technologies Roundtable Glossary]”

There were six definitions out of “pollution” search although this particular one provided not just water but other environmental media ix.

**POLYFLUOROALKYL SUBSTANCES**

This type of waste disposal would appear to also bring about the characterization of an emerging contaminant that the U.S. Environmental Protection Agency (USEPA) has had focus over several years. The potential for Per- and polyfluoroalkyl substances (PFAS) compounds have been found in many industrial and commercial products. These compounds were analyzed at the Valmont TCE Superfund site located in West Hazleton years ago as the stain resistant Scotchgard compound was applied to fabric utilizing trichloroethene (TCE). Recently the movie “Dark Waters” (2019) dramatized the real incident of the Dupont facility in West Virginia where on-site and off-site human and domestic animal receptors had serious acute and chronic health effects due to direct contact, inhalation, and ingestion pathways.

The USEPA indicates sources of PFAS compounds that include household products that could end up disposed as C&D type wastes v. USEPA has also noted that there has been observed health effects in humans and that the combined PFOS and PFOA compounds should have a health advisory level of 70 parts per TRILLION in drinking water xii. Any testing should insure that detection levels are below this health advisory concentration. The current research by USEPA was also one of the presentations at the Annual Groundwater Symposium held at University Park, Pennsylvania during May 2019. The Agency for
Toxic Substances and Disease Registry (ATSDR) also has additional health information on these compounds and with USEPA partnered with a study of exposure at Department of Defense Sites\textsuperscript{xii}. The Centers for Disease Center study had found that greater than 98% of persons in this representative sample of the civilian, noninstitutionalized U.S. population, at greater than 12 years of age, had detectable PFAS compounds in their blood (Calafat, A.M. et al., 2007)\textsuperscript{xi}. The Solid Waste Association of North America Northern New England Chapter also provides a presentation of metasudies of PFAS compounds in landfills including results of concentrations detected in leachates and detected concentrations in historical blood studies (Zemba, S., 2017)\textsuperscript{xvi}. This presentation does provide additional logic on testing for these compounds at “beneficial reuse” sites. These peer reviewed studies confirm the media reports from environmental and news organizations that PFAS compounds can be found in blood of 99% of Americans, and in the drinking water of 110 million Americans\textsuperscript{xxv}.

The objective of this concern would be that PFAS compounds could be contaminants in C&D type wastes and potentially a concern not just to “beneficial reuse” sites but also municipal/residual landfills. Considering the observed acute and chronic health effects not limited to various cancers and the very low drinking water advisory and considering the lack of any testing in landfills and waste, these should be assessed in leachate, groundwater, surface water, and possibly other environmental media. This concern would not just apply to the Simpson Quarry but to all “beneficial reuse” sites such as Hazleton Creek Properties and landfills such as Keystone Sanitary Landfill. The possibility that these compounds could be detected in landfill leachate (and subsequently in environmental media) would not be a “sky is falling” type of reaction but a reality expressed by the following research paper statement\textsuperscript{xv}:

“PFASs are of environmental and toxicological concern because of their ubiquity, persistence and long-chain PFAS bioaccumulation. Landfill leachate contains greater concentrations of PFASs than most other environmental media with the exception of firefighting training and manufacturing impacted sites.”

Matt Konfirst, PhD, USEPA Region III presenter at the 2019 Annual Groundwater Symposium provided a status of the USEPA PFAS Action Plan\textsuperscript{viii}. The Power Point presentation noted that occurrences had occurred in industrial and municipal waste landfills as well as land application of biosolids. The list of potential past and current uses of PFOS and PFOA compounds would logically also be anticipated in construction and demolition wastes.

The current data and ongoing investigations should indicate that testing for these compounds at this facility would be reasonable to insure adequate environmental protection to human and other environmental receptors.
CONCLUSION

The above three recommendations are provided for appropriate action for the Fell Township site and other communities with proposed and existing facilities as discussed above. Feel free to contact me if you have any questions or concerns on these recommendations.

Sincerely,

[Signature]

John S. Mellow
Licensed Professional Geologist

Cc: C. Martienssen (email)
    Ann Marie Shelby (email)
    J. Petrochko (email)
    J. Smith (email)
    Friends of Lackawanna (email)

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1 Mellow, John S. “Public Comment WMGR096NE001 Permit Renewal Concerns.” Received by Ms. Ali Tarquino-Morris, Hazleton Creek Properties, 1 July 2019, Hazleton, Pennsylvania. https://scholarsphere.psu.edu/downloads/tqj72p8496

2 Mellow, John S. Received by Mr. Daniel Laputo, Hazleton Creek Properties, 2 Jan. 2013, Hazleton, Pennsylvania. https://scholarsphere.psu.edu/downloads/83b591920p

3 Mellow, John S. “Public Comment.” Received by Mr. Scott Walters, Hazleton Creek Properties, 23 Sept. 2010, Hazleton, Pennsylvania.


