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To: Clean Water Council

Date: January 23, 2023

Re: Comments on PFAS Public hearing of January 19, 2023

Please finds attached my written comments for which a summary was read into the record during the hearing. In addition to the comments made as part of testimony, I have also attached a second list of comments and question with respect to PFAS.

Dennis W. Palmer, P.E.,P.P.

Executive Director/Chief Engineer

Testimony on Clean Water Council

Good afternoon!

My name is Dennis W. Palmer, P.E. I am the Executive Director of the Landis Sewerage Authority. The Landis Sewerage Authority is unique in New Jersey where we land apply all of our effluent by spray irrigation or infiltration percolation lagoons and all of our biosolids are also land applied on farmland for agricultural uses and on forest areas for agri-forestry. This has been ongoing since approximately 1989.

Today my testimony will focus on the sampling and analysis for PFAS. As the Clean Water Council looks to receive comments today on biosolids or residuals and PFAS monitoring, please do not put the cart before the horse. By that I mean that the Department did exactly that when it came to implementing the groundwater standards for PFAS and then asking those who are groundwater dischargers to sample for PFAS in their effluent. This has been continued by letter sent by NJDEP; the October 5, 2022 request for information on PFAS monitoring. These regulations and this monitoring program have sampling and analysis being performed where there are no nationwide standard methods or USEPA approved methodology that has been adopted. In New Jersey they're asking us to utilize a New Jersey certified laboratory for non-potable water, use a defined method to quantify the required PFOS in wastewater. Without having a national standard or a methodology that's contained in something such as standard methods, each laboratory is approved on its own using the isotope dilution model. Realistically, public entities bid laboratory services for a year with a one-year extension. Therefore, in the life of a five-year permit, it can realistically happen that as you rebid laboratory services, you can have data from three different laboratories. Since each lab is certified on its own technique, where is the continuity in data?

I find troubling the October 5th DEP letter requiring industrial holders of NJPDES category B or L permits to submit responses to the sewerage authority and then requiring facilities to collect two samples at least 30 days apart. This further continues the horse before the cart methodology that NJDEP is utilizing and that clearly USEPA in two memorandums, one dated April 28, 2022 and one dated December 5, 2022 which I realize follows this October 5th

DEP letter, headquarters directs all USEPA regions with respect to industrial dischargers, indirect dischargers, effluent wastewater facilities to utilize the draft method 1633. This method has been prepared by USEPA for sampling analysis of wastewater, a much more complex matrix than the drinking water 537 or 537.1. This was prepared by EPA, has been published in the Federal Register for comments and as I understand it is going to for multi-lab authentication. That said, this still provides the first uniform nationwide methodology for sampling and analysis of PFAS. It is my understanding also that USEPA is also working on a methodology for biosolids.

I would strongly suggest before we move too far down the road in sampling and monitoring even further industrial dischargers, treatment plant effluents, dischargers to ground water, as well as residuals, that this would be done after a nationwide peer review and multi-laboratory authentication has taken place on a methodology associated with the sampling and monitoring in biosolids or residuals.

DENNIS W. PALMER, P.E., P.P.
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Landis Sewerage Authority

Comments and Questions

CWC Jan 19, 2023 Hearing

1. In New Jersey, municipal and industrial residuals are managed by a number of alternatives as depicted in Figures 1 – 3 as part of the presentation.

Which residuals type (domestic or industrial) and/or management alternatives should the Department prioritize to further investigate and understand potential impacts to ground water or surface water?

The manufacturing and use of PFAS is entirely through industry. The answer to reduction or elimination of PFA's in residuals is to eliminate the use and manufacturing of PFA's. Companies such as 3M, a major manufacturer and user of PFA's has been given approval to continue using and producing PFAS through 2025. If the main goal is to eliminate or reduce PFAS in residuals, then the removal of PFAs from industrial use would seem the most logical place to start. Also, should a ban on household products be imitated in NJ? All management alternatives for industrial residuals with high levels of PFAS should be investigated as most management alternatives could impact ground water and surface waters by leaching, direct releases, and through atmospheric. The management of PFAS contamination should start at the source. Industries face limited pressure to get PFAs out of their products and use.

2. The USEPA risk assessment for the PFAS land application criteria is under development with an anticipated completion date of winter 2024.

- Should the Department require land appliers and preparers of residuals for land application to begin collecting data now to better understand the impacts of land application? Why or why not?

- **If so, what data should these entities collect and more importantly, by what methodology? NJ seems to still insist upon the individual lab isotope dilution method, why not use the USEPA method 1633? This continued lack of use of the 1633 is irrational and counter intuitive to obtaining consistent data across the state and the country, by the utilization of the same methoid.**

More sampling and monitoring are needed to get an overall picture of the current situation. The problem will be the cost associated with testing as most testing of water samples ranges from $400 to $600/sample. An industrial pretreatment program with sampling and monitoring seems to be the place to start to see which industries are having the greatest impact to residuals.

With thousands of PFAs in use, and many of the long chain chemicals being replaced with short chained chemicals picking and choosing what data to collect is no easy task.

Risk assessments will continue to be updated as new information is evaluated. We want EPA and NDEP to require the right testing and to make the right risk assessment. What are the acceptable levels and unacceptable levels of PFAS related to health and the environment? We do not have enough data currently to determine what PFAS levels should be in residuals. Terms such as "high levels of exposure" may lead to health risks can result in panic. It would seem we need to come to terms with following science over making unsound policies and collecting data that may or may not be the data we need to collect.

NJDEP might want to follow an interim strategy like the program developed by the Michigan Department of Environment. Through their IPP PFAS initiative they have been successful in identifying WWTPs that are receiving industrial discharges.

Even looking at the impacts of land application what were the background levels prior to land application? What levels of PFAS existed prior to land application in the soil? What levels of PFAS come from pesticides use, irrigation and atmospheric? Most rainwater alone (worldwide) exceeds the EPA advisory for lifetime drinking water health advisory.

3. Most residuals generators range in size based on NJPDES permitted design flows for POTWs and based on sludge production for industrial facilities. There are hundreds of residuals generators, and each will likely receive monitoring requirements in future NJPDES permits.

- How should the Department prioritize its efforts to establish monitoring requirements for residuals generators?

- What factors should be considered in this prioritization (e.g., volume of residuals generated, strength of wastewater)?

WWTPs are just the receivers of PFAS. Traces of PFAS in municipal wastewater residuals is inevitable they will continue to come from our everyday living. Deciding which PFAS are essential for humanity, and the removal of PFAS at the industrial sources not required for humanity will be the first factor. The department should first establish monitoring requirements for industrial residual generators, that we know are producers and users of PFAS. We should be addressing PFAS contamination at its source, not at the end.

4. Technologies are evolving for PFAS reduction in residuals.

- What specific technologies are available today to treat or manage residuals for PFAS reduction?
- For these technologies, what is the effectiveness and cost?
- What secondary impacts, such as air emissions, could potentially result from the use of treatment technologies.

Treatment technologies and solutions are constantly evolving.

Most technologies are for the removal of PFAS from water. Many of these treatment technologies still have a cost with disposal of the filtering system. Finding a technology which does not have disposal associated with it would be the best solution. The NJDEP in adopting the GW standard for PFAS made several erroneous assumptions as to cost. **More so they specifically stated that the cost for PFAS treatment at a wastewater treatment plant would be similar to a potable water facility. Nothing could be a more egregious scientific or engineering error as this statement**. Potable water is clean, basically has no biological life after chlorination or disinfection. Wastewater is full of biological life even after disinfection. Wastewater is disinfected and permits allow for fecal coliform colonies up to 200MPN or 40 MPN for surface water and ground water respectively. It is not pasteurized to zero. The remaining biological material will grow and clog activated carbon or ion exchange columns and will require a significant capital cost for microfiltration first.

It is important to remember that these chemicals have been in use for many years, and in the past, we were detecting parts per million, today we are detecting parts per trillion. Detection alone tells us little about the level of risks associated with PFAs.