



ALTRA-SANEXEN Comments on the Draft Wastewater Permit for the 3M Chemical Operations (Cottage Grove) Facility

By

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ALTRA-SANEXEN appreciates the opportunity to comment on the draft wastewater permit for the 3M Chemical Operations (Cottage Grove) Facility.

ALTRA-SANEXEN (altragroup.com) is an environmental solution provider, doing business throughout North America, with close to 1,000 employees in Canada and the USA. Founded more than 40 years ago, ALTRA-SANEXEN now leads the Canadian market in environmental site remediation. We have become an important player in the USA in water infrastructure rehabilitation, dredging and dewatering of municipal sludges or biosolids, and contaminated water treatment, specifically PFAS-impacted effluents, leachates, ground/surface water, and fire water.

The history of PFAS treatment work at ALTRA-SANEXEN started in 2001 (AFFF spills, in-situ remediation, foam fractionation and GAC), but PFAS really became a focus in 2013, after a terrible train derailment in Quebec, Canada (49 casualties), after which ALTRA-SANEXEN treated all the fire water, full of concentrated industrial/military-grade AFFF and hydrocarbon residues. A total of 17 million gallons of firewater was treated by ALTRA-SANEXEN over the course of 6 months. We then invested in R&D, pilots, and then PFAS treatment plants. Understanding the strategic importance of controlling its own results, ALTRA-SANEXEN also invested in a state-of-the-art analytical equipment for PFAS in 2021.

In February 2023, ALTRA-SANEXEN signed with Waste Connections the first of its kind water-as-a-service contract for SKB Environmental's Rosemont facility in Minnesota to design, build, own and operate a PFAS treatment plant for the leachates collected from the Rosemont leachate collecting system. The plant, installed in December 2023, started its operation in January 2024. It now treats on average more than 72,000 gallons of leachate per day.

Being a recognized expert PFAS solution provider, ALTRA-SANEXEN would like to provide the following comments to the MPCA.

1. After consulting the proposed draft wastewater permit, we are concerned with the proposed compliance limits for PFHxS (2.1 ng/L), PFOA (2.1 ng/L), and PFOS (2.2 ng/L). Such limits are extremely low and meeting them represents a significant challenge, both technically and economically. Industrial effluents and landfill leachates that we have sampled throughout the country often contain more than 10,000 ng/L, even more than 100,000 ng/L, of total PFAS concentration, as per US EPA 1633. For PFHxS, PFOA and PFOS alone, concentrations often fall in the 5,000 ng/L to 10,000 ng/L each or more. Meeting such limits requires removal of 99.96% to 99.98%, which currently cannot be done reliably and cost effectively. State of the art facilities like SKB Environmental's Rosemont facility now can capture more than 75-80% of all PFAS compounds, and 95% of PFOS, PFOA and PFHxS, sometimes more. However, getting to >95% for these three PFAS compounds and >50% for all PFAS, which is now where industry is at, is very far from getting

to 99.96%. Considerable investments will have to be made even to reach currently achievable removal rates.

2. We also are concerned that imposing those limits will set a precedent for future wastewater and leachates discharge permits from Metropolitan Council's Metro and Empire WWTPs, applied to most landfills in Minnesota. Landfills have not created PFAS, they are not using nor producing PFAS but are collecting PFAS indirectly through the essential services that they fulfil for our communities. Imposing such low limits will only limit their capacity to perform their essential mission.
3. We are above all worried that imposing such limits is not the solution, but more a distraction for our common goal: to get rid of PFAS in our water. While they are not at the root of the PFAS problem, landfills hold part of the solution. Subtitle D landfills have base liner systems that capture liquids percolating through the waste as well as infiltration of rain and snowmelt. By virtue of this system, landfills are safely storing and capturing PFAS that may be contained into those liquids. Helping landfills to implement treatment solutions for PFAS (if present) in the leachate they generate can be an efficient way to reduce the PFAS load that WWTFs receive. Making a precedent with the proposed compliance PFAS limits will only discourage investments by landfill owners to better manage PFAS. On the contrary, adopting reasonable targets, based both on their relative discharge to the total flow of their WWTF (e.g., 1%, 0.5%? less?) and their accounted PFAS load (20%? 30%? More?), that makes it possible for WWTF to meet DW and/or surface water limits appears as the right to do. We have performed landfill leachate treatment that almost met the new US EPA DW limits. Given the relative flow those leachates represented (1% in this example), with concentrations of PFOS, PFOA and PFHxS in the 5 ng/L to 20 ng/L range, WWTF would easily get to < 1 ng/L, with currently available technology that landfill operators can afford.

Due to the above-mentioned concerns, we urge regulators to put the manufacture and production of PFAS to a definitive end in the shortest delay and command manufacturers to stop using these chemicals in their products. Even if this happened, landfills would continue to receive products containing PFAS for decades.

ALTRA PFAS Treatment Solutions

We would like to make this final recommendation:

4. In addition to the solution provided in the previous point, we would recommend that all concentrates or PFAS-loaded residues resulting from their leachate treatment are either encapsulated or destroyed, instead of being recirculated to the landfill. Implementing this recommendation is crucial to avoid the build-up, i.e., storage, of PFAS in landfills, which would result in Point #3 to become ineffective at reducing the overall PFAS load from landfill. Technologies for doing so exists now and are being commercially evaluated at real scale. Supporting landfills in their search and adoption of best-in-class capture, concentration, containment and destruction technologies for PFAS is essential.

ALTRA-SANEXEN is appreciative of this opportunity to comment. We hope that our comments are clear, useful and will help the MPCA to come to the best conclusion in this process.

A handwritten signature in black ink, appearing to read 'Martin Bureau', with a long horizontal flourish extending to the right.

Martin Bureau



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