



Reference Project

Water Clarification of Landfill
Leachate and Gas Condensate

CarboNet ●●

An energy company faced stiff fines for breaching arsenic levels in their landfill leachate and gas condensate wastewater.

The problem: Sludge regularly gummed up filters intended for heavy metals and similar particulates during wastewater treatment. The source? Inconsistent flocs due to polyacrylamide (PAM).

↳ **PAM's weak bonds** create flocs that are too watery, too spongy, or—frustratingly—both. This inconsistent behaviour makes it hard for crews to achieve consistent output and creates havoc for filters during dewatering.

↳ **Leachate can be particularly challenging** to wastewater teams given the variability of fats, oil, and grease (FOG).

Behind the scenes: Looking to avoid regulatory exposure, the operator was spending \$25k/month on filter replacements as they sought a permanent fix for the problem.

The solution arrived in the form of SimpleFloc, CarboNet's no-make-down flocculant which, when combined with with ACH (aluminum chloride), and FeCl₃ (ferric chloride), resulted in faster solid settlement, lower turbidity, and lower FOG measurements. The effect of this was:

↳ **A 67% reduction in filter damage**, which shaved some \$200k off the P&L.

↳ **The elimination of arsenic breaches** and a cut in PAM usage by 80%

Furthermore: SimpleFloc not only improved dewatering, but delivered additional benefits:

- Crews were more efficient as they didn't have to babysit make-down
- Significantly less chemicals were introduced into the operating envelope, ensuring no permits were breached
- Crews enjoyed safer working conditions not having to deal with dry make-down dust or slips from emulsion slop

KPIs

- 67% reduction in filter damage
- 79% reduction in PAM
- Elimination of arsenic breaches

“The speed and clarity that CarboNet helped us to achieve in our water was better than anything we ever expected—the results were astounding. Not only could this save tens of thousands in equipment costs, we are impressed with how seamless the experience was.”

Plant Manager

Waste Disposal Unit