

Borough of Bellmawr mitigates PFAS ahead of State's mandated schedule

SUEZ's temporary treatment solution bridges to long-term solution for PFAS removal

Challenge

The Borough of Bellmawr in New Jersey, United States found that they had PFAS contamination in their wells in the low parts per trillion, for PFOS, PFOA, PFNA, among other variants. The source well was immediately closed in the interest of the public's health, safety and welfare. The Borough quickly engaged state and local health and regulatory agencies, holding a public forum to allay any fears from the residents.

Local leaders decided in addition to the long-term solution to meet New Jersey's emerging Maximum Contaminant Levels (MCLs) due in 1-2 years, they would also investigate what could be done right away. As the water authority addressed the long-term treatment plan to remove the PFAS from the source water, they also contacted SUEZ – Water Technologies & Solutions to discuss the interim period. They concluded that a build-out of the permanent installation would take a year or more to implement, so SUEZ presented options for a faster interim implementation.

About the SUEZ Process

SUEZ tested the water, performed mass balance calculations, evaluated the discharge conditions, studied the regulatory framework, measured the economics of alternative approaches, considered local and national "headline" possibilities, and then provided options for the best overall, tailored solution.

When addressing PFAS, SUEZ remains technology agnostic: We select from a range of technologies which may include Ion Exchange, Carbon Adsorption, Reverse Osmosis, pretreatment including Clarification, Ultra-



Figure 1: SUEZ specialty ion Exchange container used to remove PFAS in the drinking water supply

filtration, or Media Filtration; as well as water conditioning processes, along with Laboratory and on-site Water Analysis, among many other services. In all these decisions SUEZ seeks the Best Available Technology to do the job.

With our deep understanding of the special needs of Municipal, Industrial, Firefighting & other sites; for applications including drinking water, remediation, process treatment, discharge, compliance, solids management, & PFAS destruction; SUEZ delivers the right solution.

As an owner or operator of dozens of municipal and private drinking water systems, municipal drinking and wastewater systems, and solid waste handling/treatment facilities, SUEZ knows the Municipal challenge from the perspective of the owner / operator -

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in other words, from the customer's perspective. Our own operations specialists are available to help with your needs.

SUEZ serves over 450,000 industrial and business customers globally, generates over \$17Bn in annual sales, invests over \$120M per year in research and development in 17 global R&D centers, and has been granted over 3,200 patents. We serve the entire range of municipal, industrial, and firefighting site applications, with over 90,000 professionals worldwide.

With over 162 years in the water business, SUEZ is your best available partner to address PFAS treatment needs.

Solution

To address the Borough of Bellmawr's immediate need, SUEZ rapidly deployed a containerized PFAS removal system which did not require a building, could be placed directly on the ground, and is protected against weather conditions. No exposed tanks were needed. Placement and hookups were rapid and easily accomplished.

The containerized unit employs a PFAS selective, single use anion exchange resin for removing the PFAS. It is an exceptionally high capacity resin, lasting typically more than a year before an exchange is required. The system is arranged in a lead/lag configuration to optimize PFAS removal, assure longevity, and provide the security of a polishing vessel. When the bed nears exhaustion, after a period of 12 to 15 months, SUEZ replaces the resin to keep the treatment running continuously. The exhausted resin is removed and incinerated.

The decision of using SUEZ's temporary containerized solution was based on these factors:

- High capacity, extended run-time
- Low labor requirement
- Limited footprint
- "Plug and Play" installation simplicity
- Few required exchanges versus alternate media such as carbon
- Low electrical load
- "New" aesthetically-pleasing, outer housing that can protect the equipment inside from casual observation, as well as from the weather

Results

Everything worked according to plan. Bellmawr Borough was extremely helpful and acted swiftly and professionally and is happy with the result, and the rapid response available from SUEZ. At present the customer and SUEZ are working collaboratively to develop a permanent treatment solution housed in a traditional building structure.

As a result of opting for SUEZ's temporary "Bridge" solution, city and water treatment officials are able to report to their citizens, that they are meeting the prospective MCLs for PFAS ahead of schedule. They also have time to develop the permanent solution without time pressures now that the Bridge solution is in place.

Contact Us

SUEZ is a world leader in the removal, remediation and concentration of PFAS from contaminated waters, both for emergency rapid deployment, and for long term solutions. We operate in the Industrial, Municipal, and Military markets. To learn more of how we can solve your most complex PFAS challenges, please contact by visiting our website. or contacting your SUEZ representative.