

# On site collaboration yields operational cost reduction, increased worker safety, and waste minimization

**WACO PARTNERED ALONGSIDE  
OPERATIONAL MANAGEMENT TO  
EVALUATE MACHINE PROCESS AND  
PERFORMANCE, INCREASING WORKER  
SAFETY AND FACILITY UPTIME WHILE  
DRIVING DOWN OPERATIONAL COSTS.**

In collaboration with the operational management team, Waco was able to identify equipment deficits and implement more efficient filtration methods that improved filter lifetime, decreased maintenance demands, and increased uptime by 30 hours a week.







## THE CHALLENGE

**The plant was losing money in maintenance costs and lengthy replacement times as their filters wore out quickly and required daily servicing of their deep well injection site.**

Experiencing difficulty with their current filtration solution, a Chemical plant in Louisiana was having trouble with the filtration technology currently being used in their deep well application. The Waco teams process evaluation uncovered that their current filtration elements were touching thus not allowing proper flow through the cartridges, shortening the life and dirt holding capacities of the elements. In addition to challenge of the current filtration solution, elements were also coming apart as the differential pressure built up, allowing dirt to bypass the element and go downstream into the well.

Due to improper fit and flow issues, operational management was forced to shut down every day and send a two-man team to replace filters, which only had a lifespan of 24 hours. This maintenance decreased productivity time while increasing exposure risk of

the crews. The improper fit also put the machinery at risk for damage and other avoidable wear-and-tear that could force the wells to shut down.

## THE SOLUTION

**Waco worked onsite with plant management to evaluate the process and overall performance of the machinery to improve their capital and element filtration technology to deliver an overall process optimization and improve reliability of their deep well application.**

By working together to evaluate performance, Waco recognized the need for improved filtration technology. By switching from an off the shelf Resin bonded filter to a customized Filter Cartridge based on the application, the site achieved extended filter life from 24 to 36 hours, reduced maintenance change-out time from 45 to 10 minutes, and reduced the manpower required for change out to only one person. The new elements robust design offered increased filtration efficiency through improved flow characteristics. These aspects combatted cost issues, wasted materials, and unnecessary labor.

## THE RESULTS

**Waco's design cut down maintenance frequency and duration, allowing for 30 additional hours of uptime and over \$200k in savings.**

The improvement of filter lifetime necessitated fewer changes and reduced cost of materials. Fewer changes resulted in \$84k in savings on units cost, with an additional \$108k in reduced quantity usage and \$10k in decreased labor costs. Additionally, less frequent and lower maintenance times allowed for 30 additional hours of run time per week.



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