

## Wastewater Case History

# LiquiSorb® Provides Alternative Waste Disposal Technique

### Challenge

In tire manufacturing there is much more to the finished product than just rubber. Tire chords, a by-product of the manufacturing process, are coated with a proprietary dip solution that acts as a flexible adhesive/bond in tires. This dip solution has an extremely high concentration of solids in water, making traditional wastewater treatment techniques less effective, extremely slow, and cost prohibitive.

Two tire manufacturing companies were producing 2,000 - 4,000 gallons of wastewater per day. Using traditional Vacuum Drum treatment systems, the manufacturers could only treat up to 600 gallons of this wastewater per day, leaving a very large amount of wastewater to be treated offsite and safely disposed of every month. At a cost of \$4,000 per truck, managing this level of wastewater had become extremely expensive.

### CETCO Solution

To develop an alternative to the Vacuum Drum treatment system, CETCO Energy Services ran a series of field trials using clay-based flocculant chemistry. They determined that the fastest and most economical treatment method was solidifying the wastewater so it could be transported and disposed of in a landfill site. For this application, CETCO proposed using its patented granular cross-linked super absorbent media, LiquiSorb®. LiquiSorb can rapidly absorb and retain high volumes of aqueous matter—up to 250 times its weight in water. Since the solidified waste can be treated as normal waste, it can be transported to a landfill for disposal.

Using a LiquiSorb feeder, CETCO added the highly effective absorbent to the wastewater proprietary dip. Once solidified, the waste was dropped into a roll off box and hauled off to the landfill for disposal. As LiquiSorb is capable of absorbing two and a half times its molecular weight in water, the vast volumes of wastewater produced by the tire making process was reduced to a manageable level.

Additionally, solidifying the wastewater allowed the manufacturers to eliminate the haul-off of waters; the discharge to POTWs (publicly owned treatment works); the usage of fresh city water to dilute the influent and build the filter cake on the Vacuum Drum; and the costly maintenance of the Vacuum Drum equipment itself. Furthermore, their overhead costs in the waste treatment area decreased because they were able to shift personnel to profit manufacturing areas.

### Outcome

The project effectively eliminated recurring and expensive transportation costs of \$4,000 per truck for treatment offsite and reduced manpower costs. This was possible by using CETCO's LiquiSorb to solidify all the waste onsite and then simply hauling it off to the landfill while also minimizing the number of personnel needed in the treatment area.