POROUS MEDIA
CASE STUDY

FILTER LEAF UPGRADE

Background

This is a plant that collects waste water from plant processes and run-off in a large storage tank that is treated with sufidic caustic. The conventional process utilized DE as a precoat for the filter to assist in facilitating the separation of solid contaminates. This process is to prevent contamination of the down hole formations of the deep well injection system where the waste water is ultimately sent. After the filter leaf vessel, the water is then sent to tertiary vessels using string-wound cartridges for final solids removal before being disposed of via deep well injection.

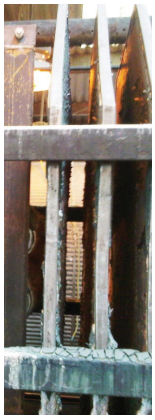
Objectives

Old operations used 200,000 lbs. of diatomaceous earth, a known carcinogen

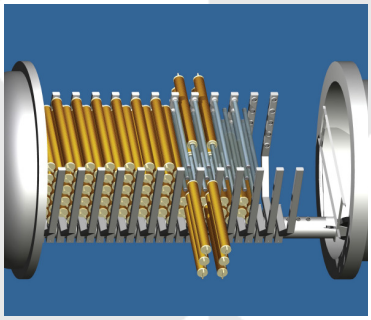
400,000 pounds of hazardous waste was produced

400 man hours annually were needed to operate the Filter Leaf Vessels

Old operations cost: $340k



3 Filter leafs inside vessel pre upgrade. The vessel held 29 leafs



Manifold design by the Nex-Sys Upgrade group replaces filter leafs and holds Compax cores and coreless elements

Element Upgrade - Compax Coreless Technology

Elimination of 200,000 lbs of DE

Compax® technology eliminated annual hazardous waste disposal by approximately 388,000 lbs

94% reduction in labor

30–45% reduction in overall operating cost

Savings: $102k - $153k

145 cores installed in manifolds

Compax coreless elements installed