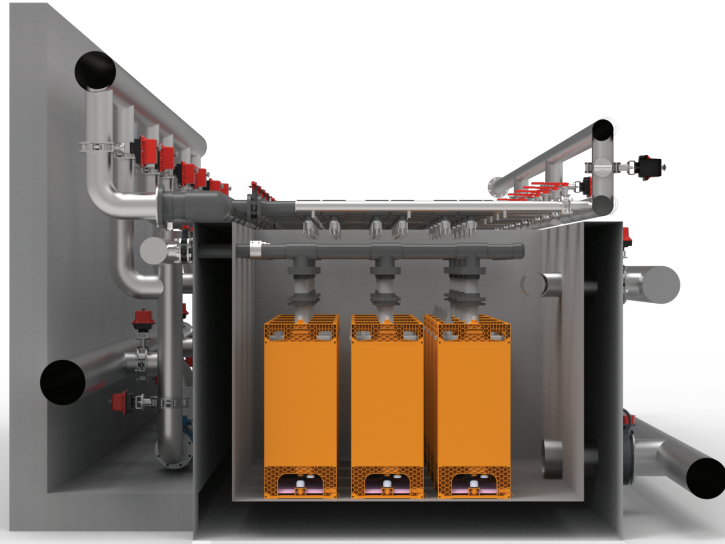


SiC | Phosphorus Removal Application

**SOUTHERN JACKSON
COUNTY PUBLIC
SERVICE DISTRICT
(SJCPSD), WV**



Title
22

MADE IN USA
THE ONLY BABA
COMPLIANT UF/MF
MEMBRANE



Certified to
NSF/ANSI 419

Certified to
NSF/ANSI 61

THE SOUTHERN JACKSON COUNTY PUBLIC SERVICE DISTRICT (SJCPSD) SERVES A SMALL, RURAL COMMUNITY IN WEST VIRGINIA WITH A LAGOON SYSTEM WHICH DISCHARGES TO AN ENVIRONMENTALLY SENSITIVE STREAM USED FOR RECREATIONAL FISHING OF TROUT. THE UTILITY, BEING MAJOR DISCHARGE CONTRIBUTOR TO THE STREAM, WAS RECENTLY REQUIRED TO MEET A VERY STRINGENT ULTIMATE BOD (UBOD) LIMIT WHICH EQUATED TO BOD LIMIT OF 3.5 MG/L AND AMMONIA OF 0.8 MG/L IN THEIR REVISED PERMIT ALONG WITH A NEED TO INCREASE CAPACITY.



The Preliminary Engineering Report (PER) recommended pumping the wastewater to a town 10 miles away which would have cost about \$100M in project cost and required the utility to give up primacy. Building a new mechanical plant was also expensive.



THE SOLUTION

A high performance lagoon-based treatment system coupled with attached growth reactor followed by Silicon Carbide (SiC) ultrafiltration and UV disinfection penciled out to be lowest capital cost to reliably meet the stringent BOD and Ammonia limits. The project designed for 0.233MGD Average Daily Flow (ADF) and 0.261MGD Peak Daily Flow (PDF) was completed in 1/10th cost of original PER estimates. SiC with its 0.1µm pore size, reliably removes 99% of particulates as well as Coliforms to non-detect levels producing high quality effluent ensuring protection of sensitive trout stream. The high UV Transmittance of >85% assures longer life of UV lamps, less replacements and reduced OPEX. Lagoon effluent can be difficult to treat for most filters. SiC being chemically resistant, allows for aggressive cleaning with chemicals, if required, without affecting the life or performance of the membrane. This is where the SiC stands out and differentiates from traditional filtration technologies. Ovivo provided a packaged filtration system fully assembled, piped, wired and tested in Ovivo factory in the Mokena, IL reducing the installation time and cost. The SiC membranes were manufactured in the state of art factory in Hutto, TX making this system fully Made in USA and BABA compliant unit. Small rural communities as this greatly benefit from Ovivo annual service packages.



THE OVIVO DIFFERENCE

Small rural communities hit with stringent limits often struggle to afford the high costs of treatment. Ovivo's SiC Technology took traditional Lagoon treatment technology to the next level to meet very stringent limits in a fraction of cost. The Ovivo ultraBLOX packaged plant was completely manufactured in the US including the SiC membranes making it BABA Compliant solution.

EFFLUENT QUALITY

Particulate BOD 99% removal

TSS <2mg/l

E.coli/Fecal Coliforms <2.2MPN/100ml

UVT >85%

