

Nikuni KTM Retrofit brings old Dissolved Air Flotation system back to life.

(September 10, 2019) – A suburban Philadelphia company that provides hazardous wastewater disposal and recycling services was having problems with their treatment system. The Dissolved Air Flotation system that was installed over a decade ago was no longer getting the job done. The company brings in dozens of truckloads of wastewater each day. The waste stream varies greatly from customer to customer, and goes through many different processes to clean it to a level that can be discharged directly to the town treatment plant. The DAF is the 'polisher', clarifying the fluid as the final step before discharge. If the product is not properly treated, the result is hefty fines from the town.

The traditional DAF system in place for years, used a standard horizontal centrifugal pump, and a separate compressed air line, that when injected into the fluid stream would form microbubbles in the range of 30 to 50 micron in size. However the plant also uses many Air-Operated-Diaphragm pumps as transfer pumps around the facility, and as they increased their number of these air pumps, the load on the air-compressor was limiting the ability of the DAF system to work properly at peak times. Plus the variations in delivered air were causing real problems with meeting the town regulations.

Ober-Read & Associates, and their Mid-Atlantic distributor Sunair proposed a Nikuni KTM pump to replace the older pump and compressor system. The Nikuni KTM uses a small injection nozzle directly into the suction of the pump, and does not require compressed air or any large air-mixing vessel downstream of the pump. The nozzle uses a venturi effect to pull air into the pump, where it is thoroughly mixed to produce bubbles between 4 and 18 microns. The bubbles float the fats and oils to the surface of the DAF tank where they can be easily removed from the surface, leaving a clean water stream that is ready to discharge to the town.

The plant has been operating for 3 months with the new Nikuni pump system, and it is working extremely well. Once installed, the pump and air nozzle does not require any adjustment to provide a reliable stream of dense microbubbles. By purchasing the Nikuni package, the eliminated the need to buy a larger compressor, and dropped their power load to the DAF process significantly.

About Nikuni

Nikuni Asahi, with headquarters in Kawasaki, Japan and manufacturing in Yamagata, Japan, is a manufacturer of pump and filtration solutions in water treatment, machine tool and industrial markets.

About Ober-Read & Associates

Ober-Read & Associates is a 68 year old Manufacturers Representative company based in Branford, Connecticut that provides pump and air transfer solutions in OEM applications including medical, semiconductor, industrial and water treatment markets.

About Sunair

Sunair Company is an industrial pump distributor in Willow Grove, PA and exclusive distributor of Nikuni pumps and filtration in Eastern Pennsylvania, Southern New Jersey, Delaware and Maryland.

