

## CASE STORY: Raw water treatment facility

### Arsenic - the health threat

Arsenic in sub-soil water is found in many countries around the world and is one of the most hazardous contaminants. Drinking water with high arsenic concentration is carcinogenic and causes chronic effects, hyper pigmentation of keratosis of the skin, heart diseases, liver enlargement, anaemia, diabetes and other diseases.

**The challenge.** Our client is a company within the food processing industry, tapping process water from an on-site well. The general well water quality is very high; however, the arsenic concentration exceeded 50 µg/l. The maximum limit accepted in the EU is 10 µg/l. The water demand at the client is 350m<sup>3</sup>/day, consumed during 20 hours. One local vendor had offered a € 150.000 solution, which was claimed to be effective.

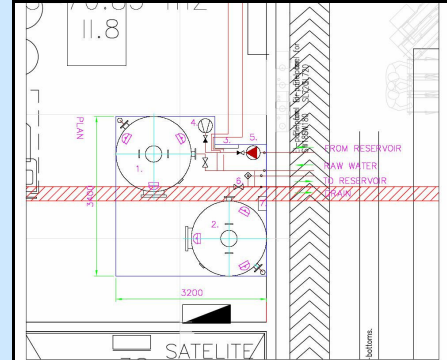
**The solution.** Sanovo Solutions completed an engineering project, evaluating the many different approaches to arsenic removal. In the first step different arsenic removal solutions were investigated and the three most suitable solutions were presented to the client. In the second phase the different solutions were weighted in cooperation with the client, with regard to technical parameters, costs and space requirement. The most favourable solution was chosen and the overall engineering was completed by Sanovo Solutions. Furthermore, the project is implemented under our supervision.

The facility reduces the arsenic content according to legislations. The investment sum is approximately € 30.000 and the operational costs are minimal.

**Technical description.** Sanovo Solutions has solved the problem with precipitation and pressure filtration in sand filters.

The advantages of the system are:

1. Low implementation and operational costs
2. No need for continuous monitoring of concentrations
3. Limited space requirements



Sanovo-Solutions has completed the full engineering of the system.



Clean water.



Pressure filters.