

CITY POTABLE WATER SUPPLY DISINFECTION



The Installation: two 250 liters per hour DCW generators were installed in a potable water treatment plant for a city supply with around 16000 inhabitants with a capacity of production of around 8600 cubic meters per day.



The Problem: during summer the water supply goes down in quality due to less water available and therefore concentration of contaminants which lead to high odor and taste to algae which originated high number of complaints from the clients. The normal treatment procedure was trough chemicals, sodium hypochlorite, potassium permanganate, activated carbon and alum. This practice was ineffective and a complementary treatment was needed. The water treatment plant directors were also looking for a green technology in order to reduce the use of dangerous chemicals and that could also be economically sustainable.



The Solution: Two DCW generators were purchased due to Neuthox's oxidation power and ability to control taste and odor as well to improve sedimentation/flocculation. The fact of DCW generators only need salt, water and electricity, and being consider a "green" technology and also economically sustainable was fundamental.

The Results: Just some hour after the dosing of Neuthox into the sedimentation tank crystal clear water without taste or odor to algae was achieved. Some days after several people were questioned about the water quality and all agreed it was without comparison regarding the last summer. The water treatment plant directors were amazed how Neuthox could make the work that all the chemicals couldn't make. All the Neuthox that is produce (500 ltr/hour) is dosed into the tanks. In terms of chlorine, 250 grams of chlorine per hour from Neuthox replaced 1,5 kg per hour of sodium hypochlorite with incomparable results.



The sedimentation/flocculation was improved and aluminum sulphate needs were reduced providing savings of around 30 Euros per day as well circa 50 Euros savings in sodium hypochlorite. During winter and better water quality more savings are expected.

The Benefits:

- **Safety**
 - no need to mix or dilute hazardous chemicals
 - environmental friendly solution

- **Efficiency**
 - elimination of biofilms and inactivation of pathogenic microorganisms including Legionella species, and nil or low bacteria counts
 - creates a longer-lasting residual than traditional chlorination, often at a lower dosage
 - right dosage, no more no less – corrosion is reduced
 - improves flocculation and sedimentation
 - taste and odor control
- **Cost reducing**
 - the system is fully automatic and only requires a minimal operator attention
 - substitution or reduction of several chemical compounds.
 - production Neuthox around 2,5 euros per 1000 liters.
- **Environment footprint reduction**
 - salt can be delivered in high quantities and stored without life time problems on the contrary with chemicals compounds.
 - the reduction or replacement of chemical compounds reduce the use of plastic reservoirs that has big impact in environment.