

## Berenplaat first large UV purification plant in the Netherlands

# Water purification using UV light

The purification site Berenplaat in Hekelingen in the province of South Holland is the largest water purification plant in the Netherlands. Each hour, eighteen million liters of drinking water is purified there. To keep ahead of the latest legislation, owner Evides decided to change to purification using UV light: a solution ready for the future.



For years, chlorine was the most important disinfectant used for purifying water. In many places it is still being used, but a gradual shift can be seen. UV light appears to be the future. In any case, Paul Oostdam, manager of new construction projects for Evides, is enthusiastic. "The quality of the drinking water is even better when UV light is used. Which is extremely important in a period when increasingly stringent requirements are being placed on the water."

The Berenplaat purification plant was ready to be replaced. New regulations to be effectuated as of 1 January 2006 place quality requirements on the drinking water that the old equipment could not satisfy. "Replacement is a project that

takes years: we started the first trial in 2000. The trial indicated that it was feasible in terms of both quality and commerce to use UV light on this scale. To date it has only been used on a smaller scale, with a lower dose: for swimming pools and surface water purification, for example. Berenplaat is the first site in the Netherlands where UV is used in this manner and on this scale," Oostdam explains.

### UV reactor

Trojan, a Canadian company, supplied the UV reactor for the purification plant. After call for tenders, this company proved to have the best offer. Evides has organized the plant in such a way that there are two successive reactors, each with ten lamps. "The water passes through here at a speed of one and a half meters per second, which is relatively fast. UV is the primary disinfectant in the purification process; then the water passes through filters to improve the smell and taste," says Oostdam.

The new purification plant, for which Nedap designed and supplied the electronic ballasts to drive the UV lamps, was put into operation in May 2005. After a few months of off-line production, the plans are to connect the equipment to the existing purification



system in August. As from September the new system will be on its own, sending even cleaner drinking water to customers in the Europoort area, Delft, parts of Rotterdam, Westland, Vlaardingen and Schiedam.