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Opening of the Aquarius wastewater treatment plant at Chemours in Dordrecht

The wastewater treatment plant for the removal of PFAS built by EnviroChemie was officially opened on 31 March in the Netherlands.

The wastewater treatment plant consists of several treatment steps and its goal is to remove more than 99% of per- and polyfluoroalkyl substances (PFAS) and, in particular, GenX chemicals from the wastewater.

After a speech given by the Plant Manager Dordrecht Works and Chemours Netherlands Director Ms An Lemaire, the ribbon was cut and the plant was officially put into service.

Chemours in Dordrecht produces fluoropolymers, plastics that are marketed under the brand name of Teflon™ and Viton™. The fluoropolymers are indispensable for the composition of many products that are essential for building a sustainable future and realising the European Green Deal and European strategic autonomy. The characteristics of the products are crucial for ensuring the operation of medical instruments and equipment and 5G data transmissions and, in a wider context, to achieve international climate goals.

The contract for the Aquarius project to deliver the wastewater treatment plant was granted in June 2020. “The COVID-19 crisis meant that the construction and communication between all involved companies was a huge challenge,” says Sicco Hilarius, Sales Manager Benelux at EnviroChemie. “None of us had ever encountered something like this before and we had quite a few headaches getting the plant ready on time.” Chemours had agreed with the government that the plant would be fully operational by 1 January 2023. As a result, there was a lot of pressure on this project. “We are pleased that the plant could be completed on time.”

The wastewater flows from production at an average of 60 m³/h and a maximum of 120 m³/h and is deposited in settling vessels, where the substances that settle can be separated from the water directly. Next, a polyelectrolyte is dosed into the water flow and the flakes that form are separated from the water by allowing them to flow into flotation plants. The pretreated water is then guided through sand and active carbon filters. Following this, the PFAS-free water can be discharged to surface water. The sludge that is transported from all tanks to the sludge storage is dewatered using a decanter.

“The special thing about this plant is the fact that all tanks have a funnel as the bottom and a screw conveyor to remove the settled sludge. Chemours decided to use that because sludge containing PFAS can be sticky and therefore very difficult to remove. By using these screw conveyors, the system has been further automated and operators rarely come into contact with the sludge, if at all,” says Hilarius.



Image: An Lemaire, Chemours' Plant Manager, holds a speech at the opening of the Aquarius wastewater treatment plant



Image: Opening of the Aquarius wastewater treatment plant at Chemours by Roberto van Hoeven, ATO Power, Marcel Middeldorp, Project Manager, Denise Dignam, Business President Advanced Performance Materials, Marc Reijmers, Manager Environment, Health, Safety and Sustainability

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