

AstraZeneca WWTP, Södertälje, Sweden

Process description

AstraZeneca is a global biopharmaceutical company. In Södertälje in Sweden, two plants for research and production are situated. Since 1998, the waste water from all activity in Södertälje is treated in a process wastewater treatment plant in Gärtuna.

The production of pharmaceuticals at AstraZeneca in Södertälje involves many different manufacturing processes, which makes the composition of the waste water variable over time. The plant is designed to reach a far reaching treatment of residual products.

Normal flow is about 36 m³/h distributed at three lines and two DynaSand filters. The DynaSand filters receive about 10 m³/h additionally from dispersion water and other internal loads.

Process waste water is treated in the following way:

- Heat exchange to reach a temperature of 26 °C.
- Biofilm carriers with micro fungus, pH 4.
- Flotation.
- Biofilm carriers with bacteria, pH 7
- Adsorption with activated carbon.
- Flotation with chemical precipitation.
- Polishing in DynaSand filters.

The plant in figures

Normal flow	46 m ³ /h
Design flow	75 m ³ /h
Maximum flow	90 m ³ /h
DynaSand filter	2 × DS5000AD



Chemical dosing and water quality

Precipitation with ferrous sulphate in a mixing tank before the flotation step, then with polymer in the flotation step. The DynaSand filters act as polishing step without any additional chemical dosage.

Parameter	Incoming to plant	Outgoing from plant
Suspended solids [mg/l]	12,5**	1,2 *
TOC [mg/l]	211*	5,7 *
Tot-P [mg/l]	3,62 *	0,051*
Tot-N [mg/l]	18,6 *	4,56*

*Average Q2 year 2010

**Before DynaSand, after last flotation step (average Q1-Q2 year 2010)

Nordic Water Products AB

Gothenburg	Nynäshamn
Sisjö Kullegata 6 •	Box 1004 •
S-421 32 Västra Frölunda	S-149 25 Nynäshamn
Tel. +46 31 748 54 00 •	Tel. +46 8 524 409 00 •
Fax. +46 31 748 54 19	Fax. +46 8 520 173 25

VAT.no: SE556399854001
E-mail: info@nordicwater.se
Website: www.nordicwater.se