

## Case study MBR BioPulse

### OEM Partner

Complete waste water treatment plant built by Haase - Landfill Germany.

### UF-process

The separation units consists of:

-Ultrafiltration unit  
and after treatment with activated carbon filter

Application : UF system for landfill leachate  
water treatment

### UF configuration

The UF plant split biomass from a bioreactor process into a clear permeate stream and a concentrate back to the bioreactor.

### UF Membranes/ Modules

|                   |                   |
|-------------------|-------------------|
| Module program    | HyperFlux I8      |
| Membrane type     | 66.03             |
| Membrane material | PVDF              |
| Membrane diameter | 8 mm              |
| Cut off           | 30 nm             |
| Module type       | MO33G 66.03 I8 LE |
| Membrane backwash | 0,5 bar           |
| Membrane area     | 4,1 m2            |

### UF design

|                     |             |
|---------------------|-------------|
| Loops               | 2           |
| Modules/Loop        | 4           |
| Total membrane area | 2 x 16,2 m2 |
| Velocity            | 2 m/s       |
| Permeate flow rate  | 2,2 m3/h    |
| Temperature         | 30 C        |
| Permeate flux       | 68 l/hm2    |
| Working pressure    | 3,2 bar     |
| Backwash frequency  | 20 min.     |
| Backwash time       | 25 sec      |

### UF analysis

|             |                |
|-------------|----------------|
| <b>Feed</b> |                |
| TSS         | approx. 13 g/l |
| COD         | 2.100 mg/l     |
| pH          | 7 – 8          |

### Permeate

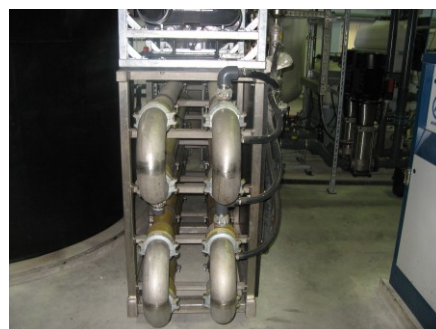
|     |          |
|-----|----------|
| COD | 180 mg/l |
|-----|----------|



Membranes/ Modules



UF unit



Bioreactor

