

Historic GHG emission measurements in the reject water treatment at Syvab



Vi värnar vårt vatten!

Setup

- Performed by IVL
- Measurement in open tanks
- Collection of process air under a hood
- Data collection periods of 1-4 weeks



Instruments

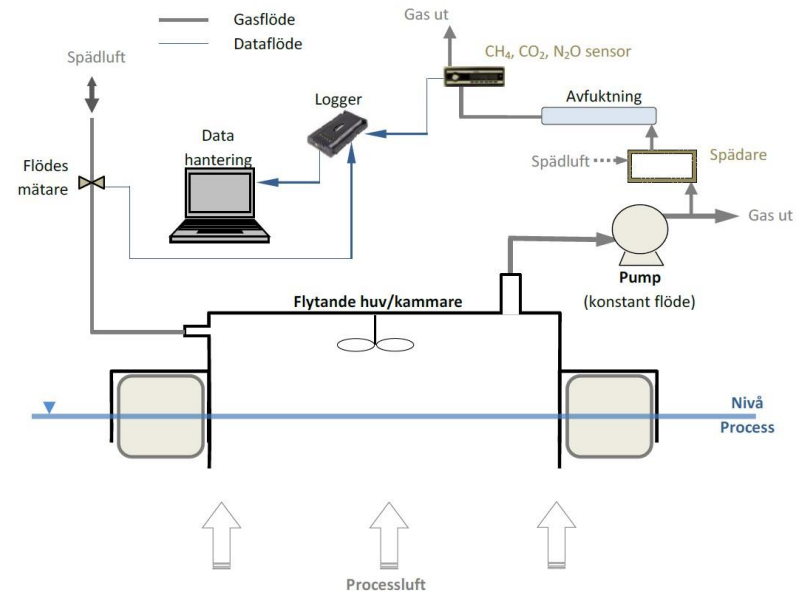
- **Collection device:** Floating hood (0,81 m²) connected to online instruments via a pump for constant airflow and a dehumidifier

2012

- **N₂O (gas phase):** Miran 1B (Foxboro)
- **N₂O (water phase):** Unisense micro electrode
- **CH₄:** JUM 3-300

2014

- **N₂O/CH₄:** MGA3000 Multi-Gas analyser (ADC Gas Analysis)



Brief results

	2012	2012 (extended)	2014
N ₂ O share of N-load	0,84%	0,70%	3,6%
kg CH ₄ /d	0,11	-	0,65

- Extended measurements covered the whole treatment stage while the others were performed in one zone of the two lines
- Both water and gas phase measured during the extended campaign → 10-20% of N₂O found in water phase
- Higher N-load and lower DO in 2014

What's next?

- New measurements are due 2019 in the new Demon process
- Covered reactors → possible to collect entire gas flow
- During 2018 purchased a Unisense instrument for water phase measurements
- Measuring campaigns of...
 - Normal operation
 - Different pH set points
 - Different aeration strategies... would be interesting!
- Two reactors – possible to use one as a reference?



Questions?

For more info, see SVU-rapport 2015-02

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