


Manual for certification of sludge

2.4 Sampling of incoming and outgoing wastewater and calculation of mass balance

Municipality of Höganäs

2013

 HÖGANÄS KOMMUN SAMHÄLLSBYGGNADSFÖRVALTNINGEN	Manual for certification of sludge	Revised:	2013-10-03
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		Established by:	Marianne Gleisner
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1. Purpose

Sampling of the incoming and outgoing wastewater is done to get control of contributions from households, businesses and other wastewater additions. Calculation of mass balances are done to find out the quality of the measurement and analysis data.



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2. Range

The procedure covers the calculation of mass balances over the treatment plant and sampling of incoming and outgoing wastewater.

3. Disclaimer

VA - manager is responsible for routine and for performing calculations. Lab Technician is responsible for the performance of sampling.

4. Instruction

4.1. Sampling

Samples are taken for analysis of the amount of incoming and outgoing wastewater, see Table 2 routine 2.1.1. Sampling in the form of daily samples occurs 2 times per month for phosphorus and 1 time per month for metals.

Instructions for how the sampler is started are located at the sampling sites. Instructions for handling samples, to be sent to an accredited laboratory, are found on the refrigerator in the lab. Before samples are sent labels are to be registered, which are then saved in the folder marked "Lab-analyser, kopior följesedlar". The binder is located in the binder cabinet in the lab.

Samples shall be taken by the person who has undergone training for "authorized sampler".

The water flow is measured continuously.


4.2. Mass balance calculation

Each year, mass balance is calculated for prioritized subject. It is done in Excel file "Fosforbalans_årtal" and "Metallbalans_årtal" by:

- 1) Quantity of incoming water, outgoing water and sludge calculated.
- 2) The flows are related to each other by a mass balance, which is set up.

Latest edition of this document is stored in the binder "Manual for certification of sludge".

Pathway to digital file: C:\Users\Ayumi Nakamura\Desktop\Collected and Categorized Euroslam Documents\Levererade dokument Euroslam\Component 3\Self Monitoring Manuals\Self Monitoring Manual Höganäs english\2.4_Prøvtagning av vatten samt massbalansberäkning.docx

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4.3. Evaluation

The accuracy of the balance is checked. The balance should be calculated for a long period of time.

Check the deviation between inflows and outflows in balance. For phosphorus the deviation should not be greater than 10%. If it exceeds 10 %, review of sampling and flow measurement routines are to be done.

5. Documentation

Analysis protocol for phosphorus in the incoming water and outgoing water is stored in binders "Analyser ackrediterat lab. årtal". The analysis results are summarized in the Excel files "Analys Årtal" under \\FILE1\Data\TekniskaFörvaltningen\Data\VA-avd\GEMENSAM\Avlopp\Reningsverket\Årtal. Fosforbalansberäkningar finns som Excel-fil under Certifiering av slam 2009_Revaq\6_Beräkningar\årtal.

Analytical results for metals in the incoming and outgoing water are stored in the binder "Ackrediterat lab Analyser Årtal ". Analysis results and results from mass balance calculations are available as Excel file under: Certification of sludge 2009_Revaq\6_Beräkningar\årtal\Metallbalans_årtal.

6. References

Routine 2.1. Sampling of sludge

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