

## MSc Project Proposal

Theme: Steam injection in landfilled wastes  
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### Background

Landfill gas is a renewable energy source that could be used more efficiently if the rate of degradation could be increased. However there are few methods available to affect the degradation of landfilled waste, especially during the later stages of methane production when the rate of gas formation is declining. It is assumed that the late stages of anaerobic degradation in landfilled waste may be limited by transport limitations due to the compaction of the wastes, and that a physical disruption may be a way to improve the situation. High pressure steam injection is one possible method for physical disruption. The goal of this M.Sc. project is to assess the impact of steam injection on the degradation of landfilled wastes.

### Methods

A literature study in the field of applied physical disruption and steam injection in various processes will form the basis for a final experimental layout. Experiments will be conducted in laboratory using aged waste samples from the Filborna landfill. The project will form a basis for later full scale experiments. The data received from the experiments are evaluated and presented using statistical methods such as comparing averages, multiple linear regression and multivariate analysis.

### Time plan

The project may be started in the spring of 2000 and is expected to take 20 weeks of full time work to complete (i.e. 800 working hours).

### Reporting

A written report and oral presentation is to be made. All reports should have a summary in Swedish and English. The reports can be written in Swedish, English, German or French.

If interested contact Anders Lagerkvist, see contact information below.