



Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis

Roberto Valencia Vazquez

Download now

[Click here](#) if your download doesn't start automatically

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis

Roberto Valencia Vazquez

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis

Roberto Valencia Vazquez

Municipal solid waste entombed in landfills will produce pollution in the form of landfill gas and leachate when the barriers fail in the long term. Bioreactor landfills are an alternative solution to avoid such negative impacts and to achieve a more stable residue, the so-called Final Storage Quality (FSQ) of residues. However, until now the main technical problem faced by landfill operators in bioreactor landfill operation is homogenous liquid distribution within the waste mass.

The main objective of this thesis was to achieve a FSQ status of waste, through laboratory and pilot-scale experiments, that complies with the Waste Acceptance Criteria (WAC) of the European Landfill Directive for inert waste. This thesis focused on the interaction and modification of the factors controlling the waste stabilisation process in a bioreactor landfill. The results revealed that within a year of operation biological stabilisation can be achieved, but not FSQ status. However, residues were close to comply with such stringent criteria. Buffer and septage addition had a positive effect on the waste stabilisation process by reducing biogas production lag-phase and risks associated with pathogen contamination. Also the use of coarse materials had a positive impact on the waste stabilisation process, especially as homogenous mixtures. The presence of Anammox bacteria - shown for the first time to be active in a bioreactor landfill - suggested that it could have contributed substantially to the removal of nitrogen, which has been identified as the main parameter to jeopardise the achievement of FSQ status.

In conclusion, this research reduced our current gaps-in-knowledge and offered feasible technical alternatives to control and steer the processes occurring in a bioreactor landfill aiming to achieve FSQ status of residues.

 [Download Enhanced stabilisation of municipal solid waste in ...pdf](#)

 [Read Online Enhanced stabilisation of municipal solid waste ...pdf](#)

Download and Read Free Online Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis Roberto Valencia Vazquez

From reader reviews:

Jean Fuller:

Have you spare time for any day? What do you do when you have more or little spare time? Yes, you can choose the suitable activity with regard to spend your time. Any person spent their own spare time to take a wander, shopping, or went to the actual Mall. How about open or maybe read a book allowed Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis? Maybe it is to become best activity for you. You realize beside you can spend your time using your favorite's book, you can wiser than before. Do you agree with its opinion or you have some other opinion?

Pauline Jefferson:

The guide with title Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis contains a lot of information that you can learn it. You can get a lot of profit after read this book. This specific book exist new expertise the information that exist in this e-book represented the condition of the world at this point. That is important to you to understand how the improvement of the world. This book will bring you in new era of the global growth. You can read the e-book in your smart phone, so you can read the item anywhere you want.

Richard McCain:

Are you kind of occupied person, only have 10 or even 15 minute in your time to upgrading your mind proficiency or thinking skill actually analytical thinking? Then you are experiencing problem with the book compared to can satisfy your small amount of time to read it because pretty much everything time you only find e-book that need more time to be read. Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis can be your answer mainly because it can be read by anyone who have those short time problems.

Hayden Roberts:

In this period globalization it is important to someone to receive information. The information will make someone to understand the condition of the world. The condition of the world makes the information quicker to share. You can find a lot of personal references to get information example: internet, newspaper, book, and soon. You can view that now, a lot of publisher that will print many kinds of book. Typically the book that recommended to your account is Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis this book consist a lot of the information on the condition of this world now. That book was represented how does the world has grown up. The language styles that writer value to explain it is easy to understand. The actual writer made some exploration when he makes this book. That's why this book suitable all of you.

Download and Read Online Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis Roberto Valencia Vazquez #6TX32Q4ZW9P

Read Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez for online ebook

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez books to read online.

Online Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez ebook PDF download

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez Doc

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez Mobipocket

Enhanced stabilisation of municipal solid waste in bioreactor landfills: UNESCO-IHE PhD Thesis by Roberto Valencia Vazquez EPub