THESIS INFORMATION

PhD student: NGUYEN THANH PHUONG

Title: STUDY ON ENHANCING THE RATE OF DOMESTIC SOLID WASTE DECOMPOSITION IN SIMULATED LANDFILL CONDITION.

Major: Environmental Technology for Solid Wastes.

Major Code: 62.85.06.10

Training institute: Ho Chi Minh City University of Technology, VNU-HCM

Scientific supervisors: Prof. Dr. Nguyen Van Phuoc
Associate Prof. Dr. Nguyen Phuoc Dan

The aim of the thesis:
- To enhance the rate of domestic solid waste decomposition in simulated landfill condition by leachate recirculation technology combined with adding effective microorganisms.
- To propose technical solutions with the aim of upgrading and improving the current technologies to support toward the existing municipal solid waste landfill situation in Vietnam.

Study subjects are domestic solid waste and leachate recirculation technology combined with effective microorganisms in order to upgrade the process of solid waste decomposition.

Thesis’s contributions:

- From the fundamental science point of view:
  - To identify technologies for enhancing the efficiency of domestic solid waste decomposition in simulated landfill condition.
  - To suggest developing the technology to facilitate the current domestic landfills condition in Vietnam.
  - To determine the kinetic parameters of anaerobic biological decomposition of municipal solid waste.

- From the applied science point of view:
  - Results of this study are the basis for upgrading the technology to increase the biological decomposition efficiency, overcoming the current limitations, and extending the lifespan of municipal solid waste landfills in Vietnam.
  - Results of this study are capable of deploying in local municipal solid waste landfills.
- Enhancing the biological treatment efficiency, minimizing environment impact, and increasing biogas recovery from landfills.

Scientific supervisors

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