

Bio-Reactive Landfill Cover Systems
A research Project Funded
by
Florida Center for Solid and Hazardous Waste Management

Progress Report 3

by
Tarek Abichou
FAMU – FSU College of Engineering

August 11, 2003

PROJECT STATUS

Task 1 – Landfill Gas Generation Data Collection

The first step of the project consisted of an extensive literature review to define the range of landfill gas generation for the different types of landfills. Literature considered included technical journals and industry publications and Representatives from U.S. Environmental Protection Agency.

An additional survey of methane flux at the Leon County Landfill is also underway to verify values by other researchers. The methane flux is being measured by the flux method as shown in Fig.1.



Fig.1 Measuring Flux at the Leon County Landfill

Task 2 – Column Experiments

Four columns were constructed so far. Soil from the Leon County Landfill was mixed with bio-solids from the Tallahassee Water Treatment Plant. Methane is being introduced at the bottom of four columns as shown in Fig.2



Fig.2 Photo of Columns with Methane Being Introduced at the bottom

Sampling ports were used to sample methane as it is moving through each column. The gas sample is then tested using the Gas Analyzer shown in Fig.3. The degree of oxidation at each port is being determined.

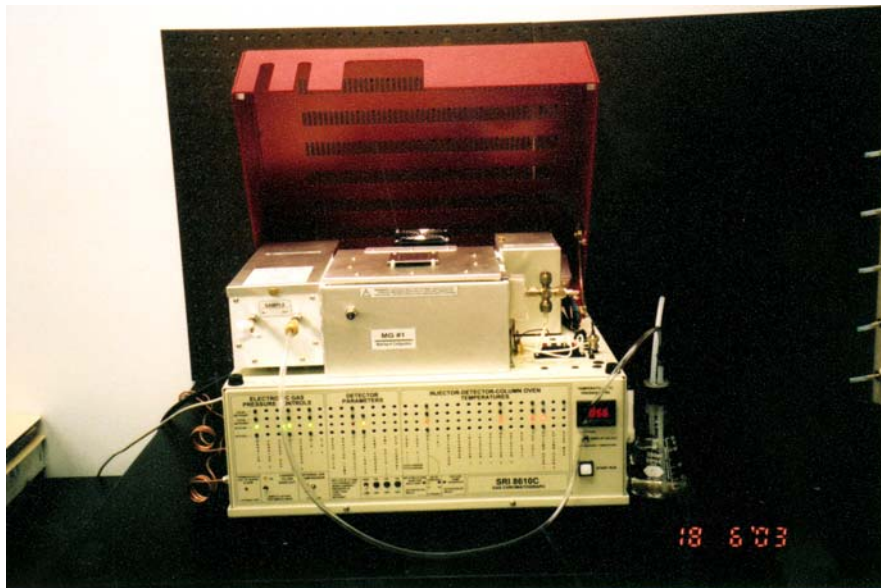


Fig.3 Gas Analyzer used During the Study