

Author: Keyword:

Search

[ADVANCED](#)[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1881-4824

PRINT ISSN : 0912-7984

BUTSURI-TANSA(Geophysical Exploration)

Vol. 58 (2005) , No. 5 pp.521-531

[\[Image PDF \(2714K\)\]](#) [\[References\]](#)**Application of electrical resistivity prospecting for interpreting landfill properties**Kazuo Kamura¹⁾, Yu Hara¹⁾ and Tetsu Noguchi²⁾

1) Environmental Research Center of Chiba

2) Geophysical & Environmental Engineering Inc.

(Manuscript received August 2, 2005)

(Accepted October 31, 2005)

ABSTRACT Disposed materials and their buried conditions vary considerably in some landfills. Geophysical prospecting methods can be used to investigate the internal conditions of such landfills without excavating. Rainwater permeates through landfills and various components dissolve as ions in pore water from fills. Resistivity of landfill relates so closely to the electrochemical properties of fills and their pore water that the electrical resistivity prospecting is supposed one of the most effective methods for the landfill investigations. In order to examine the above effectiveness, five landfill sites were selected on basis of the reclamation area and the classification of waste. Resistivity measurements were carried out there. The concrete subjects are; (1) Effects on disposed material and leachate to resistivity profiles; (2) Use of resistivity tomography for obtaining more precise profiles; (3) Use of resistivity monitoring for interpreting the properties of the landfill.

Resistivity profiles are related closely to conditions of fills. In addition, the profiles of resistivity tomography are better than those of another resistivity methods in the respects of their resolution and temporal stability. Resistivity monitoring is extremely useful for interpreting temporal changes in landfill properties.

The next targets are to study the possibilities of the resistivity measurements for a quantitative analysis of landfill stability and the identification of buried waste materials.

Key words: landfill, resistivity tomography, resistivity monitoring

[\[Image PDF \(2714K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)

To cite this article:

Kazuo Kamura, Yu Hara and Tetsu Noguchi (2005): Application of electrical resistivity prospecting for interpreting landfill properties , BUTSURI-TANSA(Geophysical Exploration), **58**, 521-531 .

doi:10.3124/segj.58.521

JOI JST.JSTAGE/segj/58.521

Copyright (c) 2007 The Society of Exploration Geophysicists of Japan



[Japan Science and Technology Information Aggregator, Electronic](#)

