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SOIL INVESTIGATION AND STABILITY ANALYSIS OF A HIGH RISE FILL EMBANKMENT FOR SEISMIC HAZARD EVALUATION

MIURA Kinya[1], MORIMASA Shingo[2], YOSHIDA Nozomu[3],
CHINO Katsuhiro[4] and MURATA Yoshinobu[5]

[1] Professor, Toyohashi University of Technology, Dr. Eng.
[2] Research Fellow, Toyohashi University of Technology, Dr. Eng.
[3] Member, Professor, Tohoku Gakuin University, Dr. Eng.
[4] OYO Corporation
[5] NPO, Network for the Action against Geo-Hazards

ABSTRACT: Seismic slope stability of a high-rise fill embankment was thoroughly investigated. The high-rise fill embankment was constructed on a ravine with mountain stream for the development of a housing lot thirty-five years ago. Since the fill embankment is located in the middle part of Japan, a seismically active area, possible failure during earthquake has been carefully examined through geotechnical surveys, field and laboratory tests, and calculations of vibration behavior and slope stability for two years. In this paper, we present the applicability of these survey and analysis methods to assess a failure risk of fill embankments as well as the results of the investigation and calculation conducted in this study.

Key Words: Earthquake, High Rise Fill Embankment, Seepage Flow, Earthquake, Stability Evaluation