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setec

Fort-De-France Airport

Analysis of soil liquefaction risk

2001

MARTINIQUE - Fort de France

Client

STBA

Owner

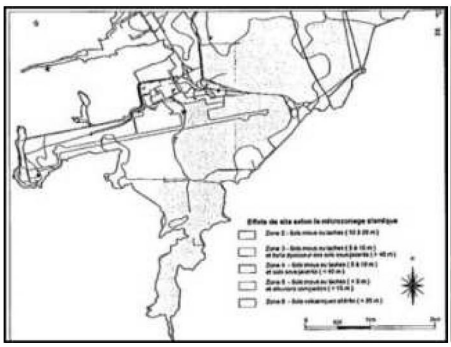
STBA

Highlights

12 French airport

1.8 million passengers

Runway 3000 m long and 45 m wide



The Project

The report "GEMETIS Fort de France 1998: evaluation and reduction of seismic risk" prepared by BRGM highlighted a possible soil liquefaction on the platform of Lamentin airport.

SBA asked STBA to carry out an additional study in order to clarify the risk of soil liquefaction along the runway and its effects on air transportation availability in case of an earthquake.

The Lamentin platform is indeed crucial in terms of access since it is the only platform on the island of Martinique.

In case of seismic crisis on the island (seismic event causing major damages), the airport is the first link for emergency transportation access.

Our Services

The aim of the study was to assess damages caused to the runway in case of major earthquake (several cases studied) and to determine the runway length likely to be used by aircrafts bringing in aid and emergency goods or evacuating potential victims.

In order to perform this assessment, a soil investigation campaign was carried out, including static penetrometers and core drillings allowing triaxial tests and resonant column tests.

The study indeed allowed to identify the potentially liquefiable zones along the runway and to conclude about the availability of the runway in case of earthquake.

Key features

- Pre-program for liquefaction risk assessment.
- Definition of methodology alternatives.
- Specifications for soil investigation and liquefaction risk study.
- Assistance to STBA for the evaluation of the technical quality of the design office services.

terrasol
Immeuble central seine
42 - 52 quai de la rapee
75583 Paris cedex 12 France
Tél +33 1 82 51 52 00
Fax +33 1 82 51 52 99
info@terrasol.com