

**WÄRTSILÄ - JAMAICA ENERGY PARTNERS
PRELIMINARY GEOTECHNICAL COMMENTS
JAMAICA**

Date 11/06/2009

GENERAL

This letter presents a review of the existing geotechnical data and preliminary comments about foundation design for the proposed 60 MW Gas Generation Power Plant on Industrial Terrace in Kingston, Jamaica.

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GEOTECHNICAL CONDITIONS

The geotechnical conditions at the power plant were presented in the geotechnical report by Jentech Consultants Limited. The geotechnical exploration program consisted of 18 borings with associated testing (SPT, Attenberg limits testing, Grain Size analysis, strength and consolidation testing).

Geology

The site is located 500 m from the southern coast of Jamaica in the Liguanea Plains Alluvium. The site consists of recent marine/fluvial sediments.

Ref Jamaica Eenergy Partners

The site overlies a layer of silty sand or clay with varying amounts of peat down to a depth of 3...5 m. Below this layer are alternating layers of silty clay and sands. In the depth range of approximately 15 m is an almost uniform, relatively narrow band of gravely sand atop silty sand. Boulders are possible within and just above this layer.

Ground water depth is generally shallow, on the order of 0...1 m below the existing ground surface.

PRELIMINARY FOUNDATION RECOMMENDATIONS

These recommendations are preliminary.

Deep Foundations

Due to the relatively low bearing capacity expected in the top layers on site piled foundations will be required for the majority of the structures on the site, to produce a safe design. This agrees with the geotechnical report.

Preliminary estimate of bearing capacity for a 300 mm driven, reinforced concrete pile, installed to a depth of approximately 15 m below existing ground surface is 400 kN, and 600 kN for the same pile installed to a depth of approximately 20 m below existing ground surface. If the site grade will be raised with fill, the pile bearing capacity must be reduced due to down drag force caused by settlements in the subsoil. This value can be predicted when more detailed site development plans are provided.

Shallow Foundations

Shallow foundations may be used for lighter structures not sensitive to settlements. Preliminary estimate of bearing capacity for these structures is 150 kPa. This value must be confirmed based on site layout and grading concept, at the beginning of the design.

Yours Faithfully,

Espoo, 11th of June, 2009

Michael Mengelt

Johanna Hellberg