

BAUER

Attn. Mr. Khalil Daher

Jdeidet El Maten, Cortbawi Building 4th floor.

Lebanon.

Date: 23/05/2018

Our Ref: L-JADAM-LMS-1703/18

Your Ref:

Subject: Jannah Dam and Lake Works Phase II – Past Performance Questionnaire.

Dear Sirs,

Following the successful completion of BAUER's part of the project, I would like to express my appreciation for the means and methods in which BAUER has performed on the project.

BAUER Spezialtiefbau GmbH, whose office is located at BAUER Straße 1, 86522 Schrobenhausen, Germany has been engaged by *Andrade Gutierrez* for the construction of *Jannah Dam and Lake – Phase II* project, a Dam located on the river of Nahr Ibrahim in the district of Byblos Mount Lebanon Governorate with a capacity of 38 million cubic meter, which feeds the area of Beirut, Byblos and its Suburbs; including a hydroelectric power of 40MW. The main scope of work concerning BAUER was the Construction of the Upstream and Downstream Diaphragm wall.

Details of the Contract

Execution period: Within 5.5 to 6 month after Mobilization.

Location: Jannah Area on the River stream of Nahr Ibrahim.

Details of Cut-of wall / **D-Wall** / Piles ...

Quantity: 4,400 m2 Upstream D-Wall and 5,844 m2 Downstream D-Wall.

Length: 127.82m Upstream D-Wall and 160.49m Downstream D-Wall.

Max. Depth: 50m.

Thickness: 1m Upstream D-Wall and 0.8m Downstream D-Wall.

Geological condition:

From top up to a depth of about 15-20m the alluvium consists namely of gravel, highly rounded pebble and occasional boulders of basalt and limestone in a sand matrix. Underlying these coarse soils there is silty and coarse sands with a maximum thickness of about 20m in the current river channel. Clays, silty-clays and/or sandy clays may occur at the bottom of the alluvium. The bedrock it's mainly dolostone, and in occasional places by limestone and basalt filling the fault zones.

ANDRADE GUTIERREZ ENGENHARIA, S.A.

LEBANON OFFICE: Beirut Symposium, 9th Floor, Office B

Sin El Fil, Beirut - Lebanon

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The professional way in which the BAUER team prepared and executed the works was very well received. Trial mixes and generally quality management and control along the detailed method statement secured the highest standards of quality for the product.

The work carried out in constructing the Diaphragm Walls in the Republic of Lebanon was very professional.

When there were issues or questions related to the particular works, BAUER was proactive in seeking a solution and correcting the problem or answering the questions. I also note that the issues were few and infrequent.

BAUER's professional approach towards Health Safety Environment (HSE) was excellent. The project was executed within the agreed schedule but even less.

Sincerely Yours,
By and behalf of the Contractor


by/ Luis Melo de Sampaio
Contractor's Representative



CONTRACTOR'S REPRESENTATIVE

ANDRADE GUTIERREZ ENGENHARIA, S.A.

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