



Kashimbila Dam, Nigeria



PROJECT SUMMARY

NAME: Kashimbila Dam

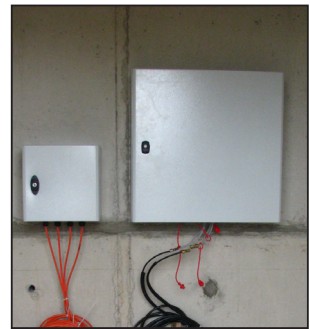
YEAR: 2014

CLIENT: Federal Republic of Nigeria/Natra

MAIN CONTRACTOR: SCC Nigeria

CONSULTANT: AURECON

CONSULTANT: Geosense



OVERVIEW

Construction of a new multi-purpose 40-Megawatt dam in Taraba State, Nigeria will generate much needed electricity for the country and provide job opportunities, social and economic benefits to people in the area.

The preliminary design was for a dam with a storage capacity of 200 million m³ but this was subsequently increased to 500 million m³.

The main challenges were related to the lack of data in the hydrological and geological studies as well as the project location in the extreme south-eastern part on Nigeria, which required long travel times on very poor roads. The hydropower station was initially designed with an installed capacity of 18 MW, however, following detailed hydrological modelling and yield analysis carried out by Aurecon, a 40 MW installed capacity was implemented. Aurecon's input on this project led to a more economical design of the dam and an increased installed capacity for the hydropower station.

MONITORING

Liquid Level Settlement plates were installed at various levels within the embankment dam as the fill material was added. Together with VW Piezometers to monitor the pore pressure, these would provide a good picture of what was happening within the dam fill material during construction.

Geosense Technicians have recently returned from on-site assistance and training provided to the local site team for the Settlement Cells and VW Piezometers.

PRODUCTS USED

VW piezometers

Measurement of pore water pressure.

VW Liquid Level Settlement Plates

Used to monitor settlement or heave in soils and other structures such as embankments, earth and rockfill dams.

VW Rotary Switch Terminal Boxes

For the connection and reading of up to 34 instruments.

VW2106 Readout

Portable readout for use with any vibrating wire sensor.