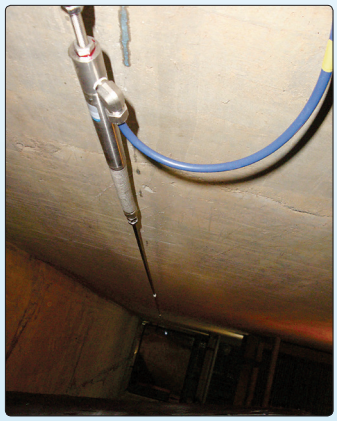
# Kpong Generating Station, Ghana

Cable and protective conduit



Convergence meter

Local staff training

Kpong Generating Station

The Kpong Generating Station, across the Volta River in Ghana, Africa, is a concrete structure suffering from Alkali Aggregate Reaction (AAR) — a condition causing concrete to expand over time, which may lead to structural distress.

In the summer of 2009, HATCH (from Niagara Falls, Ontario Canada), a world leader in AAR analysis and remediation, retained GKM Consultants to supply and install a monitoring system at the Kpong Generating Station.

The instrumentation was comprised of a series of survey monuments along the crest and spillway. In addition, Geokon's Model 4425 Convergence Meters (Vibrating Wire type), designed to cover spans of 12 m to 24 m, were used in the shafts adjacent to the turbines.

The convergence meters were monitored using a Geokon Micro-800 Datalogger which provided the HATCH and the Volta River Authority (VRA, dam owner) engineers with remote access and control of the monitoring system, via Ethernet and Modem.

In spite of the equatorial heat and humidity, and the electrically noisy environment, the deployment and operation of the monitoring system went according to plan. GKM and Geokon are very pleased to have been of assistance to HATCH and the VRA in this project.