

international construction

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SUPPLEMENT



India

p49

MARKET REPORT

Tunnelling

p33

EQUIPMENT

Roads

p23

SECTOR

Foundations

p41



EQUIPMENT

Treviicos

Dam difficult work

Treviicos, the US subsidiary of Italy's Trevi Group, is playing a key role in the stabilisation of some of the most unsafe dams in the US.

The US Army Corps of Engineers (USACE) is responsible for maintaining water resources infrastructure in the US. When it comes to dams, the Corps has developed its Dam Safety Action Class (DSAC) to assess and prioritise repairs.

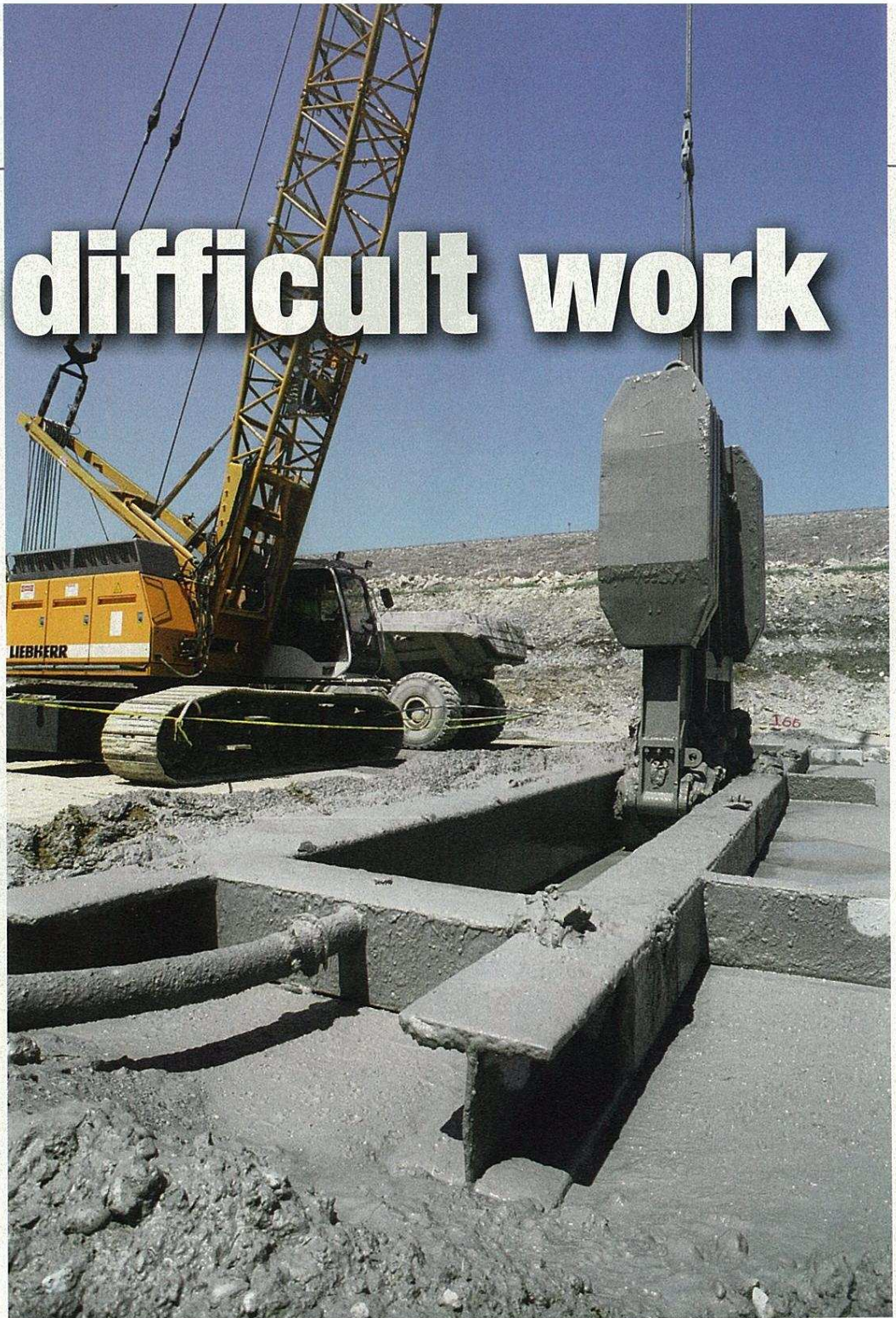
This system identified six dams out of a total of 130 large structures that emerged as a top priority. They were given DSAC I categorisation, meaning they were in danger of total or partial collapse.

One such structure was the Wolf Creek Dam on the Cumberland River in Kentucky, which had been monitored for seepage by the Corps for several years.

A 50:50 joint venture between Trevi and Soletanche-Bachy was awarded the work following an evaluation process that found the bid to be "Best value". Rather than going for the lowest price, the USACE Nashville District looked at a range of criteria, including safety record, technical expertise, experience, training and so on.

The joint venture's plan is to construct a cut-off wall using secant piles and panels that will go deeper than the previous 1970s era consolidation work. This is designed to create a more effective barrier against seepage.

Treviicos is also bidding to work on another DSAC I-category dam, the Herbert Hoover Dike on Okeechbee Lake in Florida. Built in the 1920s and 1930s, the structure



has an annual battering from hurricanes. Seepage has increased as a result, and the Corps is also concerned a severe hurricane could cause a catastrophic collapse.

Relationship

Treviicos is on the three-company short list for the work which is expected to comprise the construction of several cut-off walls using a hydromill trench cutter and ground stabilisation mixes.

A less pressing, but still challenging project for the company is the Tuttle Creek Dam in Kansas, which had the less serious, but still

urgent, classification of DSAC II.

Built on the Blue River in the 1950s and 1960s, the structure lies near the Humbolt Fault, which makes the region prone to earthquakes. Such an event, combined with current seepage, could cause the liquefaction of the sandy strata the dam sits on, causing a catastrophic collapse.

The solution designed by the Corps involved the construction of a buttress along the entire width of the dam's downstream face. Another innovation was use of the Corps' Early Contractor Involvement (ECI) scheme, which saw Treviicos

come on board earlier than usual and work as a partner to the Corps. The company said this resulted in reduced costs and early completion of the project.

In fact the relationship between the Corps and Treviicos goes back to 2003, when the company worked on the Walter F. George dam in Alabama. Vice president of operations Stefano Valagussa said, "With the USACE we've established a level of partnering that enables us to meet the challenges and complexities of the projects. We're proud of our reputation with the Corps."

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