



Project name: Manapōuri Powerstation Rock Support

Client: Meridian Energy

Project date: 2023

Project description

As a component of Meridian Energy's ongoing asset management programme, consultant engineers WSP were engaged to evaluate the Manapouri access tunnel wellbeing. Some sixty years has elapsed since construction, although some upgrading of ground support has been done over the intervening years, using shotcrete and rock bolting.

WSP designed an evaluation programme based on pull testing, over coring and localized bolt replacement.

Geotech Ltd, were awarded a physical works package and duly mobilized to Manapouri. Although very remote, Meridian Energy staff were extremely helpful and that significantly remediated the isolation difficulties.

Industry standard testing was conducted, all from an elevated man cage. Natural tunnel ventilation was sufficient, but took some management as airflow and direction varies with climatic conditions and station power production. Shotcreting and drilling using diesel compressors and gensets was conducted when ventilation conditions were favourable.

Resources applied

Marini Drill
Mack Hiab (with man cage mounted)
Clever dry shotcreter

Heavy machinery was supported by hand tools, grout mixers and pneumatic pumps.

Project value

\$136,193.00

Project references

Meridian Energy – Neil Sutherland
021 247 8484

Client Engineer (WSP) – Sam Baker
021 473 439

Project Manager (Meridian Energy) – Scott Hill
022 440 1971

Project Engineer (McManus Geotech Ltd) – Kevin McManus
021 207 7793