METAFLO technologies™

Australia's Longest Road Tunnel Made Efficient with MetaFLO's Waste Transport Solution

Rapid solidification technology simplifies waste handling, saving time and costs for Sydney's NorthConnex project.

CASE STUDY

METAFLO technologies™

PROJECT

MF003 – NORTHCONNEX TUNNEL PROJECT

Sydney, Australia

MF003
MetaFLO Technologies

Challenge

The NorthConnex Tunnel, Australia's longest road tunnel project, generated large volumes of mud and slurry during excavation, which needed quick removal to keep construction on schedule. Traditional disposal methods required transporting liquid waste using vacuum trucks over long distances, leading to high costs and logistical challenges. The heavy use of vacuum trucks increased emissions and fuel costs, putting additional strain on the project's budget and sustainability goals. An on-site solidification solution was essential to minimize transport needs and maintain efficient site operations.

Solution

MetaFLO introduced its MF003 reagent to treat the liquid waste on-site, transforming mud and slurry into a stackable solid within minutes. This allowed the material to be loaded onto standard tipper trucks instead of vacuum trucks, significantly lowering transportation costs and simplifying logistics. MetaFLO's solution enabled waste removal to proceed smoothly alongside excavation, keeping tunnel sites clear and optimizing truck availability for continuous work. The MF003 reagent also met environmental standards, making it a compliant and sustainable choice.

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Outcome

- **COST SAVINGS**
  By eliminating the need for vacuum trucks and minimizing long-distance transport, the project achieved cost savings of approximately $200 per tonne. These savings had a significant positive impact on the project's overall budget, allowing resources to be reallocated to other critical areas of construction.
- **PRODUCTIVITY BOOST**
  Faster waste handling allowed teams to keep excavation areas clear and work continuously without interruptions. The availability of tipper trucks for waste transport ensured efficient removal and maintained the construction pace, reducing the risk of delays and associated costs.
- **ENVIRONMENTAL COMPLIANCE**
  The solidified waste met regulatory standards for disposal, enabling safe, environmentally responsible disposal at nearby clean fill sites. By reducing transportation requirements and emissions, the project supported its sustainability commitments and minimized environmental impacts associated with traditional waste handling.