METAFLO technologies™

DusTech Improves Air Quality for a Gold Mining Dam

MetaFLO's use of a high-quality dust suppression biopolymer helped a gold mining dam improve air quality to keep workers and communities safe in a rapid and cost-effective way.

CASE STUDY

METAFLO technologies™

PROJECT

DUSTECH – DUST SUPPRESSION FOR GOLD MINING DAM

Crixás, GO - Brazil

DUSTECH
MetaFLO Technologies

Challenge

Effective dust suppression is becoming mandatory as numerous health and environmental concerns associated with excessive airborne particulate matter are raised during mining works. Dust harms the environment, compromises human health, negatively affects communities and reduces overall business productivity. Traditional methods for dust suppression usually require a high amount of water, utilizing 5-9 water trucks per day.

Solution

MetaFLO first applied 3.0% of the DusTech biopolymer, diluted directly in a water truck and applied to the site, with a gold mining tailings soil characterization. DusTech's application promoted greater agglutination between soil particles, significantly reducing dust suspended in the air. It created a layer on the surface of the soil that reduced the release of fine particles into the air through a clumping process. A second application was carried out after 17 hours, using a 2.0% dosage.

Outcome

- COST SAVINGS
  Using DusTech for dust suppression over traditional methods cut fuel consumption, emissions of polluting gases, labor and machinery costs by 50%.
- WATER SAVINGS
  Water consumption was decreased by 50%, saving 180,000 liters of water per day and reducing the need for additional surface moistening.
- QUALITY OF THE ROAD
  With DusTech, soil agglutination was improved, and road safety was enhanced—with greater visibility for traffic and improved air quality for employees, the environment and nearby communities.

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Figure 1: Before DusTech

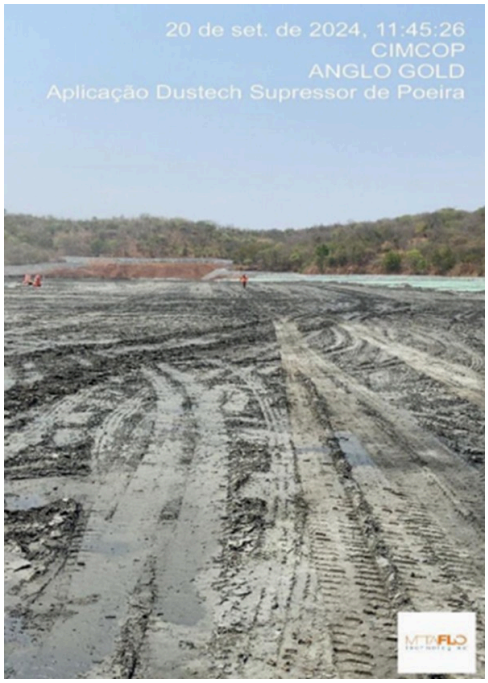

Figure 2: After Dustech