

CASE STUDY

PROJECT

Geochemical characterisation for site contamination investigation

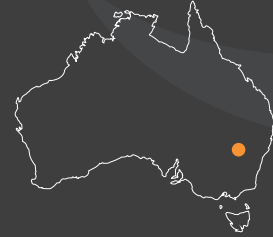
SECTOR

Mine Closure

COMMODITY

Zn, Pb, Cu, Ag

LOCATION



ISO

9001:2015 | 14001:2015 | 45001:2018





SGME performed geochemical characterisation services to determine the source of site contamination from a previously rehabilitated abandoned mine.

Site description

The site was an open cut mine near Armidale in central New South Wales (NSW) and is managed as part of the government's legacy mine program.

The problem

An absence of vegetation on the former 0.16-hectare (ha) ore processing footprint has led to high erosion rates and low stability.

SGME solution

SGME provided a thorough report to comprehend soil and waste rock geochemistry as well as water quality that enabled informed decision-making. We made recommendations for treatment to ensure the most practical environmental outcomes to reduce receiving environment impacts. These recommendations were used to update the legacy mine closure plan including corrective actions and cost estimates. Additionally, our services included:

- geochemical testing of soil, waste rock and surface water to assess potential contamination;
- a soil fertility and erosion potential assessment; and
- a cost estimation for corrective actions.

SGME provided an understanding of soil and waste rock geochemistry as well as water quality to inform decision-making. We made recommendations for treatment to ensure the most practical environmental outcomes that reduce receiving environment impacts. These recommendations were used to update the legacy mine closure plan including associated corrective actions and cost estimates.

SGME's approach to mine closure planning focuses on dynamic adaptation, accuracy and relevance throughout the mine's life cycle. We prioritise strategic evolution planning, active stakeholder engagement and a commitment to sustainable development. By collaborating with stakeholders, integrating leading practices and leveraging advanced technologies, we empower clients to implement responsible closure practices and create enduring value beyond closure.