



Tellus provides safe, cost-effective disposal and permanent isolation of lead contaminated waste generated during the gold assaying process

CLIENT'S SECTOR

Mining, Scientific, Analytical and Technical Services

CLIENT'S WASTE TYPE

Lead contaminated cupels, fire assay waste

THE CLIENT CHALLENGE

Disposal of hazardous lead waste generated from gold analysis

Laboratory analysis during the gold assaying process produces lead contaminated cupels (flat, porous dishes made of a refractory, or high-temperature-resistant material). Professional analytical laboratories servicing Australia's gold industry perform cupellation to remove impurities from gold and during this process, the cupel can become highly contaminated with lead, making its disposal a serious risk of environmental contamination and a liability to community health.

Lead is highly toxic and does not break down over time, so it poses considerable long-term public health and environmental contamination risk. Regulators and the community recognise that this hazardous waste should be permanently isolated from the biosphere removing risk and protecting the environment and people. However, analytical laboratory services producing this hazardous waste material, face a challenge in its safe disposal due to the current lack of sufficient infrastructure, at a cost-effective price point, that can provide a permanent solution. Many of these waste producers' resort to storing their waste in temporary solutions on site or with third parties which can create increased health, safety, environmental and regulatory risk and contributes to Australia's legacy waste problem.

TELLUS SOLUTION

Safe and cost-effective storage and permanent isolation at the Sandy Ridge near surface geological repository

Tellus has provided the industry with a safe and cost-effective solution, offering permanent isolation at the Sandy Ridge near surface geological repository. The lead contaminated cupels can be placed and encapsulated within the facility using environmentally sound management (ESM) principles that protect the environment and community from contamination risk. This innovative solution follows world best practices for the safe management of hazardous lead waste, which requires a permanent solution that can meet today's safety requirements as well as providing protection for future generations. The superior site selection and multi-barrier safety case at Tellus' Sandy Ridge Facility means that this waste will be permanently isolated from the biosphere over geological time (millions of years).

In addition to the permanent isolation solution provided to these technical laboratory services, Tellus also supports the circular economy by placing like-with-like waste at its Sandy Ridge Facility. It is looking to create opportunities for the future recovery of valuable materials, such as lead, at a proposed technology park on site. Tellus' business model supports environmental and social sustainability and mirrors international solutions operating in the UK, Europe and North America.

“ It is great to now have a disposal option for used cupels from our lab. Tellus' Sandy Ridge facility has provided a cost-effective solution which we were needing. These materials need a permanent solution and now we have one. ”
Lab Manager, WA based Laboratory Service