

ENVIRONMENT



SGS ENVIRONMENTAL MINESITE SERVICES

2011

WHEN YOU NEED TO BE SURE

SGS

SGS ENVIRONMENTAL MINESITE SERVICES

SGS IS THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY AND IS RECOGNISED AS THE GLOBAL BENCHMARK FOR QUALITY AND INTEGRITY.

SGS AUSTRALIA

SGS is the world's leading testing, verification and inspection company with a global presence and strategically located sites around the world. SGS Australia follows this notion by providing well placed and expertly appointed service locations around both metropolitan and regional areas.

ENVIRONMENTAL SERVICES

SGS Environmental Services prides itself in offering state-of-the-art testing services where and when it matters most. With expertise from around the globe, SGS Environmental Services in Australia are committed to providing the highest level of expertise to help you meet your testing obligations.

MINESITE SERVICES

With support from Agricultural, Environmental, Geochemical, Industrial, Mineralogical and Metallurgical divisions, SGS is able to provide the most comprehensive service offering for minesite investigations, as a compliment to the Geochemical and Environmental services for which the SGS brand has become known. Couple this with global and regional centres-of-excellence for a range of testing requirements and it soon becomes clear why SGS is your preferred holistic service provider.

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WATER SERVICES

SGS OFFERS A RANGE OF SERVICES TO SUPPORT THE LEGISLATIVE AND DUE-DILIGENCE WATER MONITORING REQUIREMENTS OF MINING OPERATIONS

- **Drinking Water:** In accordance with state and territory guidelines for the analysis of drinking water, SGS is able to offer a full range of chemical and biological analyses to assess water quality.
- **Wastewater:** Whether effluent, drainage or leachate, SGS has a service to assist in the classification of the water for correct handling, treatment or disposal. SGS can also assist in the feasibility for beneficial re-use of waste streams.
- **Groundwater:** There are a number means for impacts to reach Groundwater as a direct result of mining operations. SGS has the technical competencies to analyse for contaminants of potential concern across a broad spectrum of chemistry, geochemistry and metallurgy.
- **Surface Water:** Rivers, creeks, dams, tailings ponds, settlement pads and evaporation basins all require some level of close monitoring. At SGS we can offer solutions for the independent verification of on-site measurement through to wide-ranging analysis to assess concentrations of key species through to attenuation and degradation processes.
- **Acidic Discharge:** Whether from acid bearing soil or rock, SGS has a solution for the testing, modelling and treatment of your acidic water discharge. From routine monitoring to full-scale water treatment plant technology, SGS can work with mines at any time in their life cycle to help mitigate and combat this highly sensitive issue.

SOIL SERVICES

CONTAMINATED SITES INVESTIGATIONS ARE A CONTINUOUS PART OF THE PUZZLE TO EFFECTIVELY MANAGE AND CONTROL SOIL CONDITION WITH A VIEW TO REHABILITATING THE LAND AT END-OF-LIFE

- **Contaminated Sites:** In accordance with legislation, SGS has the solution to test for your contaminants of potential concern. With industry leading technology and expertise, Environmental investigations in soil, tailings, rock and dust can be better understood.
- **Waste Classification:** When the soil needs to be disposed of, it needs to be tested first. Our laboratories are fully equipped to undertake the necessary analysis to help you meet the requirements.
- **Acid Sulphate Soils:** ASS is a major contributing factor when it comes to mining, infrastructure and land rehabilitation. With laboratories strategically positioned to perform timely and professional analysis, SGS offers a solution to your ASS investigation needs.
- **Beneficial Re-Use:** SGS can assist in the development of agricultural and agronomist's reports to assess the feasibility of beneficial re-use of soil, spoil or over-burden (etc). With a range of services tailored to suit the local conditions of your site we have the technology and expertise you need.

WATER SERVICES
SOIL SERVICES



AMD/ARD SERVICES

ACID MINE AND ACID ROCK DRAINAGE STUDIES ARE BECOMING AN EVER-MORE PREVALENT PART OF MINESITE MANAGEMENT, WITH EXISTING AND UPCOMING LEGISLATION SET TO INCREASE THE REQUIREMENT TO DEMONSTRATE SHORT- AND LONG-TERM ENVIRONMENTAL AWARENESS

- **Static testing:** ABA, ABCC, ANC, NAPP, NAG, WRA, XRF, XRD... acronyms all synonymous with testing of mine tailings and waste rock analysis. In addition to ASS services, SGS is strategically located to support your need for this testing
- **Leach Testing:** Whether the testing is for Australian, Canadian or European compliance, SGS has your testing needs covered. With expertise around the globe, SGS is compliant with, and ahead of, the latest developments in short- and long-term leach testing
- **Kinetic Testing:** Kinetic testing allows minesite operators to markedly increase the rate of breakdown of disturbed rock in a way that replicates the environment in which it is (or may be) located. The data is then used to model the likelihood and/or nature of acidic discharge from your site – and hence the problems you may face. In accordance with both internationally recognised methodologies (c.f. MEND Project) and local guidelines (e.g. AMIRA Project in parts of Australasia), SGS provides expert services and the best possible solution to your needs

OH&S SERVICES

WITH EXTENSIVE EXPERIENCE AND A RANGE OF EXPERTISE, SGS IS ON HAND TO PROVIDE OH&S SERVICES THAT MEET THE REGULATORY REQUIREMENTS AS WELL AS GIVING YOU THE TOOLS TO KEEP YOUR WORKFORCE HAPPY, HEALTHY AND SECURE

- **Asbestos:** Natural and introduced forms of asbestos and asbestos containing materials are of primary concern, especially in working environments. SGS has a team of dedicated professionals conducting both home-base and on-site testing for Asbestos ID and Fibre-Counting.
- **Dust:** Dust emanation and deposition can be a serious concern to minesites. SGS offers solutions for active and passive dust monitoring, including ultra-trace analysis of the constituent chemicals of potential concern.
- **Noise:** On-site assessment for noise is available through our team of experienced QHSE representatives.
- **Air:** Analytical services are available for the assessment of Ambient, Indoor and Confined-Space Air. Whether Air-Toxics in accordance with the latest USEPA methods or underground mine samples against NIOSH, we have the analytical solution you need.
- **Training:** Training services and mine safety courses are available through our STAX business, who can also offer site security and management solutions.

SITE SERVICES

SGS'S TEAM OF FIELD OPERATIVES ARE ABLE TO SUPPORT OR REPLACE THE NEED TO HAVE ON-SITE SAMPLERS, ALLOWING YOUR OWN SPECIALISTS TO FOCUS ON YOUR SITE NEEDS

- **Sampling:** Whether for contaminated sites, tailings, water treatment or occupational hygiene, SGS can strategically position the right expert at the right time.
- **ROSS:** Rapid On-Site Screening is a range of services aimed at the delineation of contamination across a site. Drawing on technology utilised in exploration and health-sensitive Haz-Mat scenarios, SGS can provide on-site expertise with all the equipment needed to undertake high throughput screening.
- **Plant Commissioning:** Construction oversight, testing and training of Pilot Plant and Full Plant as part of EPCM, Production or Pre-Closure as well as legacy needs, especially relating to water treatment and mine drainage.
- **Advanced Services:** SGS provides process control solutions for the most advanced mine sites in the world and can design and implement in-line automated sampling at all stages of the logistics chain.





DUE DILIGENCE

AS A WORLD LEADER IN CERTIFICATION, VERIFICATION INSPECTION AND TESTING SERVICES, SGS IS EQUIPPED WITH AN ARRAY OF SPECIALISTS TO SUIT ANY STAGE OF THE MINE LIFE. FROM ENVIRONMENTAL BASELINE TO STAKEHOLDER ENGAGEMENT AND FROM EXPLORATION TO CLOSURE SGS ACTS IN YOUR BEST INTERESTS TO ACHIEVE A SUCCESSFUL OUTCOME

- **Proposal Stage:** Review of Project Scope and perform Gap Analysis for all parties involved in the project. Subcontractor appraisal and pre-approval to ensure competency.
- **Project Execution:** Stakeholder engagement and public consultation in partnership with relevant client, stakeholders or technical experts. SGS can assess the efficacy and applicability of sample collection practices and provide technical of direct analytical Quality Control.
- **Management & Consolidation:** A thorough review of all data is essential for every milestone of the project – there's nothing worse than finding a gap or a conclusion drawn from an erroneous data point. SGS can perform a complete Management System Audit including all processes and documentation. Data handling and presentation services are also offered using state of the art enterprise and high security storage.

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