

Integrated Solutions for the Mining Sector

A woman with short dark hair, wearing blue safety glasses and a blue button-down work shirt, is smiling and looking towards the left. She is sitting at a desk and typing on a keyboard. In the background, there is a computer monitor and some laboratory equipment. The overall scene is a professional laboratory or office environment.

Trusted. Independent. Committed.

SGS

Our mining services are mapped to every stage of the mining lifecycle — giving you one trusted partner from exploration to rehabilitation

+

Exploration, Resources
& Development

+

Feasibility Studies

+

Planning & Construction

+

Operation & Production

+

Transportation

+

Closure & Rehabilitation

+

Business Assurance -
Sustainable Mining

SGS

SGS Business Principles

Success through...



INTEGRITY

Making sure we build trust

We act with integrity and behave responsibly. We abide by the rules, laws and regulations of the countries we are operating in. We speak up; we are confident enough to raise concerns and smart enough to consider any that are brought to us.



HEALTH, SAFETY & ENVIRONMENT

Making sure we establish safe and healthy workplaces and protect the environment

We fully protect all SGS employees, contractors, visitors and other stakeholders, as well as physical assets and the environment from any work-related accident, exposure and any kind of damage.



QUALITY & PROFESSIONALISM

Making sure we act and communicate responsibly

We embody the SGS brand and its independence in our everyday behavior and attitude. We are customer-focused and committed to excellence. We are always clear, concise and accurate. We strive to continually improve quality and promote transparency. We respect client confidentiality and individual privacy.



RESPECT

Making sure we treat all people fairly

We respect human rights. We all take responsibility for creating a working environment that is grounded in dignity, equal opportunities and mutual respect. We promote diversity in our workforce and do not tolerate discrimination of any kind.



SUSTAINABILITY

Making sure we add long-term value to society

We use the scale and expertise of SGS to enable a more sustainable future. We ensure our impact on the environment is minimised throughout the value chain. We are good corporate citizens, investing in our communities and enabling a better, safer and more interconnected world.



LEADERSHIP

Making sure we work together and think ahead

We are passionate and innovative people with a relentless desire for improvement. We work in an open culture, where smart work is recognised and rewarded. We foster teamwork and commitment.

Let's make sure that SGS is a great place to work

Gilbert Ghostine
Chair of the Board

Géraldine Picaud
Chief Executive Officer

SGS

When you need to be sure

The English version of this document constitutes the binding version.

SGS in Australia, NZ & PNG

We operate an unmatched network of commercial and on-site mine geochemical laboratories across Australia, offering a complete solution to meet your geochemical needs.

Our Mining Centre of Excellence in Perth, Western Australia, is equipped with state-of-the-art instrumentation, fully automated sample preparation and analysis systems, and an extensive suite of analytical capabilities.

As a global hub for SGS, our Perth laboratory plays a leading role in research and development, method advancement and rigorous quality assurance. We're also a registered quarantine facility with the Australian Quarantine and Inspection Service (AQIS), enabling secure and compliant sample imports.

Accreditation

- ISO 9001:2015 Accredited Laboratory
- NATA ISO 17025 Accreditation
- AS/4801:2001 Safety Management Plan
- ISO 14001 Environmental Management Plan
- OHSAS 18001



500+
Laboratories

125
Countries

140+
Years

Our global presence and local expertise means that we'll always be on hand to optimise your metals and mining projects, regardless of your operations location.



Artwork: 'Working Together with Respect for Culture' by Anna Dowling

Support responsible operations, strengthen compliance and maintain long-term stakeholder confidence

Sustainability & Environmental Management

We work alongside our clients to manage environmental risk across the mining lifecycle, supporting compliance, performance and transparent reporting.

Our services provide accurate, defensible data to support environmental monitoring, impact assessment and sustainability reporting, aligned with recognised standards and regulatory requirements.

Environment, Sustainability & Governance (ESG)

Our ESG experts provide mining clients with independent, practical advice aligned with recognised frameworks and industry standards. We tailor ESG programs to your operation, supporting implementation across the value chain, from procurement and operations through to stakeholder engagement and reporting.

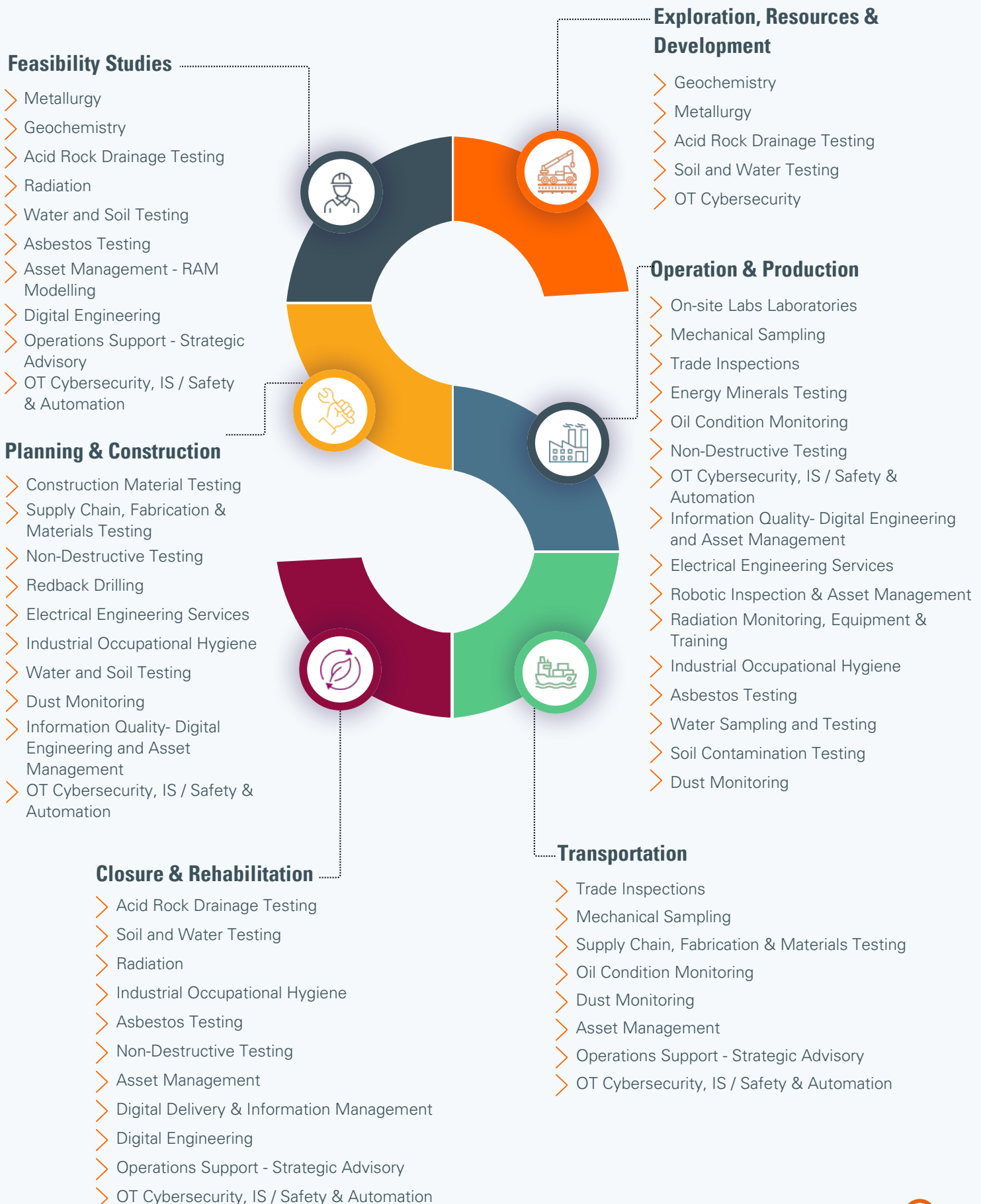
Reconciliation & Social Responsibility

We are committed to building respectful, meaningful relationships with Aboriginal and Torres Strait Islander peoples and communities.

Through our Reconciliation Action Plan, we support cultural awareness, inclusive practices and stronger engagement across our operations and partnerships.



Unified Supplier, Unified Data for the Entire Mining Value Chain





Confidence from the first sample

Early-stage decisions shape the direction and value of your entire project. In exploration, data quality, turnaround time and consistency directly impact how quickly you can define resources and move forward with confidence.

We support exploration programs with accurate, timely and globally consistent data, helping you reduce uncertainty, prioritise targets and accelerate decision-making from greenfield exploration through to resource definition.

We help you:

- Generate reliable geochemical and environmental data for critical decision making
- Maintain consistency across sites, regions and laboratory networks
- Reduce delays with fast, scalable laboratory and field solutions
- Identify environmental risks early, before they become liabilities
- Strengthen resource confidence for investors, approvals and project development



Exploration, Resources & Development

- + Geochemistry
- + Metallurgy
- + Acid Rock Drainage Testing
- + Water and Soil Testing
 - + Water Testing for Potable Water, Wastewater, Ground Water and Surface Water
 - + Soil Testing for Waste Classification, Contaminated Sites, Acid Sulphate Soils and Beneficial Re-use
- + OT Cybersecurity

Geochemistry



Accelerate decision-making, reduce rework and improve confidence in exploration outcomes

We deliver accurate, consistent geochemical data to support exploration targeting, resource definition and project development. Our global laboratory network and advanced analytical methods enable reliable detection across a wide range of commodities, helping you make faster, more confident decisions.

- Onsite lab solutions
- Multi-element analysis (ICP-OES, ICP-MS)
- PhotonAssay™ and fire assay for gold, silver and copper analysis
- XRF, portable XRF and field based solutions
- Ultra-trace and low-level detection methods
- QA/QC aligned to international standards

Faster, safer gold analysis to accelerate exploration and decision-making with PhotonAssay™

We operate multiple PhotonAssay™ units across Adelaide, Kalgoorlie, Orange and Perth, providing a rapid, non-destructive alternative to traditional fire assay. Using high-energy X-ray technology, PhotonAssay™ delivers accurate analysis of gold, silver and copper from samples of up to ~500 g in under two minutes. By eliminating sample destruction and significantly reducing turnaround times, it enables faster, more confident decisions across exploration, grade control and resource estimation.

Unlike conventional fire assay, PhotonAssay™ removes the need for lead and other hazardous reagents, reducing chemical waste and improving laboratory safety. The result is a more efficient, lower-impact analytical solution that supports both operational performance and sustainability objectives.



Metallurgy



Understand processing performance early, reduce technical risk and support confident progression

Early-stage metallurgical understanding is critical to reducing technical and financial risk as projects move from exploration into resource definition and development.

Through Independent Metallurgical Operations (IMO), part of the SGS Group, we provide metallurgical testwork and advisory services to characterise ore behaviour, assess processing options and identify potential risks early. Our work supports resource evaluation, flowsheet development and initial economic assessments, helping ensure project assumptions are grounded in reliable, practical data.

Key capabilities include:

- Preliminary metallurgical testwork to assess ore response to processing methods
- Mineralogical and metallurgical characterisation to understand variability and processing behaviour
- Comminution testing to support early design and energy requirements
- Leach and flotation testing to assess recovery potential and process suitability
- Variability testing across ore domains to identify processing risks
- Early flowsheet development and process option assessment
- Sample preparation and composite development for representative testwork programs

Acid Rock Drainage Testing



Identify environmental risks early and support project design and approvals

We assess the potential for acid rock drainage in waste rock and tailings to support early risk identification and environmental planning. Our testing helps distinguish materials that may generate acidic conditions, informing mine design, waste management strategies and regulatory approvals.

Static Testing

We offer a range of static ARD tests to characterise the acid-forming and neutralising potential of waste rock and tailings.

- Acid Base Accounting (ABA)
- Acid-buffering characteristic curve (ABCC)
- Acid neutralising capacity (ANC)
- Net acid producing potential (NAPP)
- Net acid generating (NAG)
- Whole rock analysis (WRA)
- X-ray fluorescence (XRF)
- X-ray diffraction (XRD)

Static testing provides an early indication of acid generation risk, allowing you to:

- Screen materials quickly and cost-effectively
- Inform waste rock classification and handling strategies
- Identify potential environmental risks before development progresses

Kinetic Testing

Kinetic testing simulates the breakdown of disturbed rock under controlled conditions, providing insight into how acid generation may develop over time.

We conduct kinetic testing in line with internationally recognised methodologies, including MEND, and regional guidelines such as AMIRA in Australasia. This allows you to:

- Predict long-term drainage behaviour and water quality impacts
- Inform mine design and waste management strategies
- Support closure planning and rehabilitation strategies
- Provide reliable data to support regulatory approvals and stakeholder engagement



Water and Soil Testing



From field sampling to laboratory testing and clear reporting. We help you make faster, evidence-based decisions

Our environmental laboratories deliver soil, water and plant testing to support mine sites in managing environmental risk and health, and meeting regulatory requirements. We provide accurate, traceable and defensible data to support compliance, approvals and ongoing site performance.

All testing is conducted under NATA accreditation to ISO/IEC 17025, and aligns with local and federal legislated guidelines and standard methods. Our results are recognised by regulatory authorities across Australia.

Make informed decisions with our industry leading soil and water services to aid your business and protect the environment and human health.

Water testing services

Potable Water Testing

We support drinking water programs at mine sites and surrounding communities, helping you verify treatment performance, monitor on-site water supply quality and ensure water is safe for human consumption in line with Australian drinking water guidelines.

Key capabilities include:

- Microbiological testing
- Ultra-trace metals and major anions testing
- Organic compound analysis, including hydrocarbons, PAHs, pesticides, volatiles and PCBs
- Disinfection by-products testing, including HAA, THM, NDMA, bromate, bromide, chlorate and chlorite
- Microparticles of polymers identification

Wastewater Testing

We provide comprehensive wastewater analysis for process water, tailings discharge and stormwater runoff, supporting both pre- and post-treatment analysis to verify compliance with environmental licence conditions.

Key capabilities include:

- Pre- and post-treatment compliance testing
- Industrial and process effluents analysis
- Metals, hydrocarbons, nutrients and organic contaminants
- Wastewater characterisation for treatment and optimisation
- Hazardous waste classification and disposal suitability





Water testing services (Continued)

Groundwater Testing

We deliver groundwater monitoring and analysis to support baseline characterisation, regulatory compliance and long-term resource protection. Our ISO/IEC 17025–certified laboratories offer fast turnaround and deep expertise to meet your legal, social and commercial obligations.

Key capabilities include:

- Full suite organic analysis via gas chromatography (hydrocarbons, PAHs, volatiles and PCBs)
- Ultra-trace and heavy metal analysis
- Leach testing procedures
- Metal and cyanide speciation
- Major anions, cations and general chemistry
- Microbiological analysis
- Pesticide and herbicide testing
- Monitoring bore water quality assessment

Surface Water Testing

We provide surface water testing for rivers, creeks, drainage systems and marine environments impacted by mining activities, supporting baseline studies, impact assessments and ongoing monitoring.

Key capabilities include:

- Chemical, biochemical and microbiological analysis
- Low-level detection aligned to regulatory requirements
- Mobile laboratory capability for remote operations
- Baseline and ongoing environmental monitoring
- Marine and freshwater ecosystem assessment
- Reporting to support audits and water management plans





Soil testing services

We provide soil testing services to support early-stage exploration, baseline environmental studies and project approvals. Our teams deliver accurate, defensible data to help you identify risks early, meet regulatory requirements and progress your project with confidence.

Waste Classification

We provide the analytical data required to classify soils, drill cuttings and investigation-derived waste generated during exploration activities. Accurate classification supports compliant handling and disposal, reducing regulatory risk and avoiding delays to field programs. All testing is conducted under NATA accreditation, delivering precise, traceable and legally defensible results aligned with state waste management frameworks.

- Testing for metals, inorganics, hydrocarbons, ecotoxicology and radiochemistry parameters
- Hazardous and non-hazardous waste classification testing
- Leachate and toxicity testing (TCLP and related methods)
- Compliance testing against state waste classification guidelines
- Classification of drill cuttings, soils and investigation-derived waste
- Legally defensible results with full chain-of-custody documentation

Contaminated Sites

We support early identification and assessment of soil contamination to inform exploration activities, baseline studies and approval requirements.

Key capabilities include:

- We do analysis for a wide array of soil testing from Acid Sulfate Soils, AMD, Asbestos, Metals, Inorganics, Organics and Unknowns for each part of your mining lifecycle
- Factual reporting aligned with regulatory guidelines



Soil testing services (continued)

Acid Sulphate Soils

We are one of Australia's leading providers of Acid Sulphate Soil (ASS) analysis, supporting exploration programs in coastal, low-lying and estuarine environments. Early identification of ASS risk is critical, as disturbance of sulphidic soils can generate sulphuric acid and impact surrounding land and waterways.

Our NATA-accredited laboratories process over 10,000 ASS samples annually, delivering fast, reliable results to support baseline studies, environmental approvals and field program continuity.

Key capabilities include:

- SPOCAS and Chromium Suites analysis under NATA accreditation
- Standard three-day turnaround from receipt at laboratory
- Static and kinetic ASS predictive testing methods
- Industry-leading detection limits using modern laboratory equipment
- Support for ASS management plan development and regulatory reporting

Beneficial Re-use

We provide accredited analytical data to support early-stage assessment of soils and waste materials generated during exploration. Our testing helps determine appropriate disposal pathways or potential for limited re-use, aligned with regulatory requirements.

Our NATA-accredited laboratories deliver accurate, defensible results to support environmental compliance and efficient material management in the field.

Key capabilities include:

- Sampling and analysis of soils and exploration-derived materials
- Testing against regulatory thresholds for re-use or disposal
- Analysis of contaminants relevant to intended end-use
- Leachate testing to assess environmental suitability
- Reporting to support regulatory requirements and approvals



OT Cybersecurity



Design secure, resilient systems early and reduce cyber and operational risk

As mining projects become increasingly automated and connected, cybersecurity must be considered from the earliest stages of design. Decisions made during exploration and development directly impact the security, resilience and operability of future systems.

We support projects with OT cybersecurity strategy, risk assessment and secure-by-design architecture to ensure control systems, networks and digital infrastructure are built on a strong, defensible foundation.

Key capabilities:

- OT cybersecurity strategy and roadmap development to define a clear, risk-aligned approach from early project stages
- Secure-by-design architecture reviews to ensure control systems and networks are built with security embedded from the outset
- ICS and OT risk assessments to identify vulnerabilities and inform design decisions across control and automation systems



Reliable data for confident feasibility decisions

Feasibility studies are where technical data is translated into investment decisions. At this stage, accuracy, consistency and independence are critical to validating assumptions, reducing risk and progressing projects with confidence.

We provide integrated testing, inspection and advisory services to support pre-feasibility and feasibility studies. Our teams deliver consistent, high-quality data across geochemistry, metallurgy, environmental and engineering services, helping you reduce uncertainty, support study outcomes and move forward with clarity.



Feasibility Studies

- + Metallurgy
- + Geochemistry
- + Acid Rock Drainage Testing
- + Radiation Testing
- + Water and Soil Testing
- + Asbestos Testing
- + Asset Management - RAM Modelling
- + Digital Engineering
- + Strategic Advisory & Consultancy
- + OT Cybersecurity, IS / Safety & Automation



Metallurgy



Optimise processing pathways and validate project value

SGS, together with Independent Metallurgical Operations (IMO), our specialist metallurgical arm and part of the SGS Group delivers expert metallurgical consulting and advanced laboratory services to the global mining sector. Our multidisciplinary teams of geologists, mineralogists, metallurgists and process engineers work as an integrated unit to reduce technical uncertainty, optimise processing strategies and strengthen project economics across a wide range of commodities, including base metals, precious metals, platinum group elements and critical minerals.

At feasibility stage, our focus is clear: generate high-quality data and insights to support flowsheet development, recovery optimisation and confident investment decisions.

Consulting

We deploy specialist metallurgists to support feasibility studies through targeted, project-specific advice and technical oversight.

Key capabilities include:

- Sample selection and metallurgical domain definition
- Geometallurgical interpretation and variability assessment
- Flowsheet development and optimisation
- Pre-feasibility and feasibility study support
- Technical due diligence and independent review
- Client representation and owner's team support

Laboratory Testwork

We provide access to advanced metallurgical testwork programs, designed to generate reliable data for process design and project evaluation.

Key capabilities include:

- Bench-scale and pilot-scale testwork programs
- Comminution, flotation, leaching and beneficiation testing
- Process variability and optimisation studies
- Integration with geochemical and mineralogical data
- Tailored programs aligned to feasibility study requirements

Geochemistry



Consistent, reliable data to support resource confidence and project evaluation

At feasibility stage, geochemical data underpins resource estimation, mine planning and financial modelling. Accuracy, consistency and reproducibility are critical to ensuring results are suitable for technical reporting and investment decisions.

We deliver advanced geochemical analysis to support feasibility studies, providing consistent, comparable data across commodities, projects and laboratory networks. Our global capability ensures alignment with study requirements, reporting standards and jurisdictional expectations.

Key capabilities include:

- Multi-element analysis across a wide range of commodities and sample types
- High-precision analytical methods including ICP-OES, ICP-MS, XRF and fire assay
- Advanced gold analysis, including PhotonAssay™ and fire assay techniques
- Low-level detection and high-accuracy analytical programs
- QA/QC programs aligned with local regulations and reporting standards
- High-volume sample processing with consistent turnaround times



Acid Rock Drainage Testing



Support compliant design, reduce long-term environmental risk and strengthen feasibility confidence

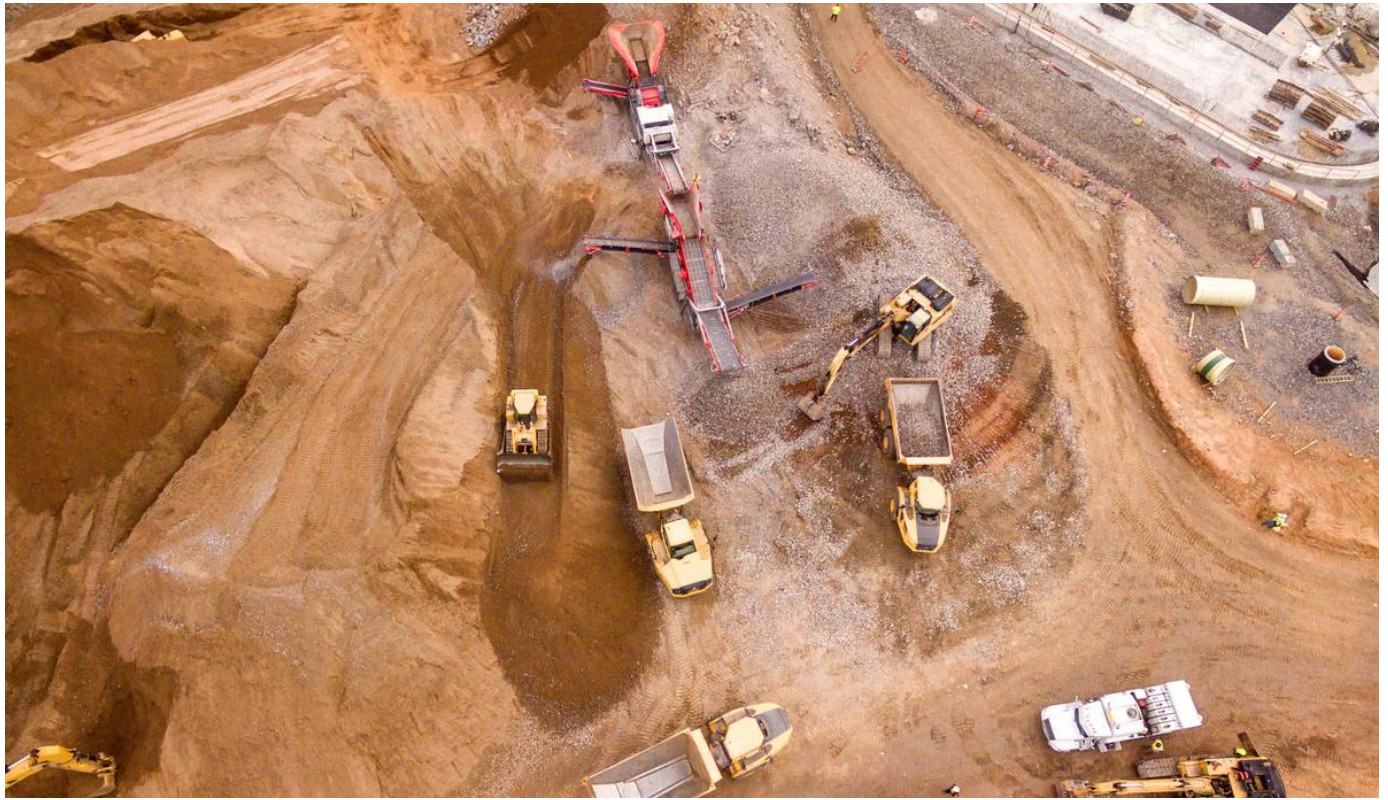
At feasibility stage, ARD testing provides critical data to assess the long-term behaviour of waste rock and tailings. SGS delivers static and kinetic testing programs to characterise acid generation potential and predict drainage quality over time.

Our results support waste management strategies, water treatment design and environmental approvals, helping you reduce risk and make informed project decisions.

Key capabilities include:

- Static testing (ABA, NAG, NAPP, ANC, ABCC)
- Kinetic testing aligned with MEND and AMIRA methodologies
- Whole rock analysis (WRA), XRF and XRD
- Data to support waste classification, modelling and mine design

Radiation Testing



Managing radiological risk and regulatory compliance with confidence

We provide NATA-accredited (ISO/IEC 17025) radiation testing and analysis to support feasibility studies, environmental impact assessments and regulatory approvals. Our specialists deliver accurate, reliable data and practical guidance to help you assess radiological risk and meet compliance requirements.

Key capabilities include:

- NORM assessment across soil, water, sediments and mineral ores
- Radionuclide analysis, including uranium and thorium decay chains, radon, Ra-226, Pb-210 and gross alpha and beta
- Health physics support, including licensing, regulatory applications and radiation management planning
- Field sampling and specialist advisory services
- Fast turnaround, with three-day analysis available for priority programs



Water and Soil Testing



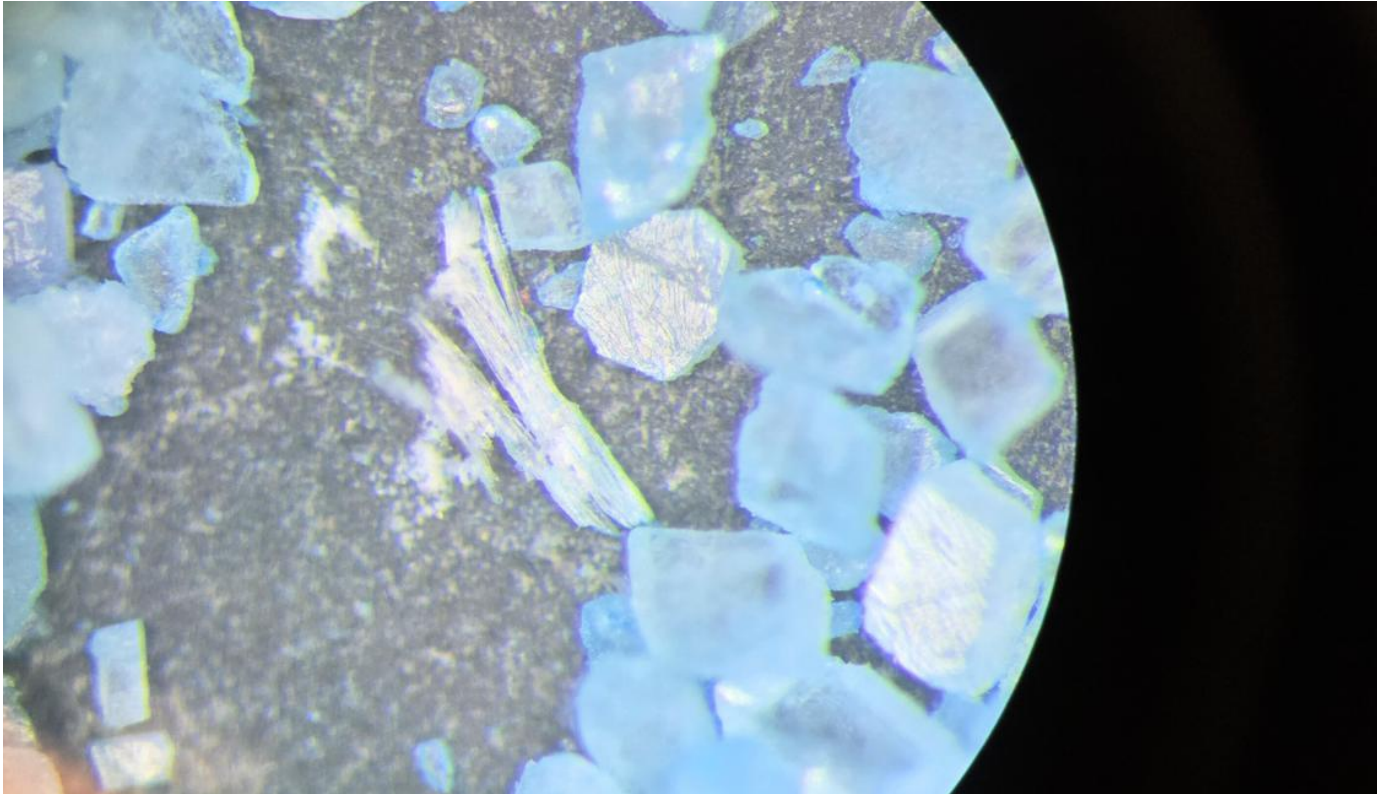
Support environmental approvals, reduce regulatory risk and establish a robust baseline for ongoing monitoring

Accurate baseline data is critical during feasibility, forming the foundation for environmental impact assessments, approvals and long-term site management. Gaps in baseline information can delay approvals and increase uncertainty in future monitoring and compliance.

We provide comprehensive water and soil testing services to support baseline environmental programs, helping distinguish natural background conditions from potential mining-related influences. Our services support feasibility studies, approval pathways and early risk identification.

Our NATA-accredited (ISO/IEC 17025) laboratories deliver reliable, independent results aligned with Australian regulatory requirements. Through integrated field sampling, laboratory analysis and reporting, we support groundwater, surface water, soil and sediment programs, providing the data needed to inform mine design, water management strategies and ongoing monitoring frameworks.

Asbestos Testing



Identify asbestos risks early, support safe work practices and maintain compliance

Asbestos can present a significant risk during site redevelopment, particularly when working with existing infrastructure and disturbed materials. Early identification and accurate classification are critical to managing exposure risks and maintaining compliance.

We provide NATA-accredited (ISO/IEC 17025) asbestos testing to support site investigations, refurbishment and construction activities. Our services deliver reliable, independent data to inform risk management and enable safe project progression.

Key capabilities include:

- Asbestos surveys and sampling of soil, rock and existing structures
- Identification and classification of friable and non-friable ACM
- Air monitoring to assess potential exposure risks during site activities
- Soil and sediment testing to AS4964 and relevant regulatory methods
- Reporting to support regulatory compliance and site redevelopment planning
- Fast turnaround and digital reporting to support project timelines



Information Quality (IQ)

Strengthen data, reduce lifecycle risk and support confident feasibility decisions

Information Quality (IQ), part of the SGS Group, supports feasibility studies by improving how engineering, asset and operational data is structured, governed and applied. By strengthening data quality early, we help link design decisions to operational performance, reduce lifecycle risk and provide a clear foundation for project delivery and long-term operations

Asset Management - RAM Modelling

We apply reliability engineering and RAM (Reliability, Availability, Maintainability) modelling to validate design assumptions against expected operational performance. This provides early insight into availability, maintainability and operational risk before capital investment decisions are made.

Key capabilities include:

- RAM modelling and reliability/maintenance strategy development
- Reliability and maintenance studies including FMECA, RCM, RBI, SIL and IPF
- Maintenance data development aligned to CMMS and ERP systems to support operational readiness

Digital Engineering

We structure and govern engineering data from the earliest stages of project development, ensuring information is consistent, traceable and aligned with feasibility requirements and downstream asset needs.

Key benefits include:

- Configuration and administration of integrated 2D and 3D engineering design systems
- Development of structured data models, class libraries and data environments
- Definition of systems architecture to support data consistency and traceability
- Change management and back-drafting to maintain alignment between evolving designs
- Preparation for digital handover into asset management and operations

Operations Support - Strategic Advisory

We provide operational and maintenance input during feasibility to assess whether designs are practical, maintainable and aligned with long-term production requirements.

Key benefits include:

- Operational readiness input aligned to basis of design
- Advisory to optimise maintenance and operating strategies
- Development of practical operating and maintenance methodologies
- Reduction of rework and over-specification through clear standards and governance



OT Cybersecurity, Functional Safety & Automation



Define secure, compliant system requirements and reduce risk before project execution

We support owners and project teams during feasibility by embedding OT cybersecurity, functional safety and automation requirements into early design and planning.

By defining system requirements, validating risks and aligning with recognised standards, we help ensure control systems and digital infrastructure are secure, compliant and ready for execution and operation.

Key capabilities include:

- **OT Cybersecurity**

- OT cybersecurity strategy and roadmap development
- Secure-by-design architecture reviews and ICS/OT risk assessments
- IEC/ISA 62443 gap assessments and definition of capital project cybersecurity requirements
- OT network segmentation, firewall and secure remote access design

- Operational resilience planning including business continuity and disaster recovery (BCP/DR)
- Cyber governance frameworks, executive risk reporting and third-party/vendor access governance

- **IS / Safety**

- Functional safety lifecycle support including PHA, LOPA, SRS and SIS design
- Functional Safety Assessments, FAT/SAT planning and validation
- Alarm philosophy development and fire & gas mapping studies

- **Automation**

- Control and safety system design, verification and validation
- SCADA/HMI design, asset and OT documentation
- Functional safety lifecycle compliance and system obsolescence planning



Verify materials, fabrication and systems to support safe, compliant construction

Planning and construction is where material quality, fabrication and system integrity directly impact safety, performance and project outcomes. At this stage, independent verification and accurate testing are critical to managing risk, preventing defects and keeping construction on schedule and within budget.

We support mine site development with integrated construction materials testing, supply chain assurance, NDT, electrical engineering and environmental services. From verifying materials and fabricated components through to confirming compliance with Australian and international standards, our laboratories and certified inspectors provide the reliable data you need to progress with confidence.



Planning & Construction

- + Construction Material Testing
- + Supply Chain, Fabrication & Materials Testing Services
- + Non-Destructive Testing
- + Redback™ Drilling Tools & Manufacturing
- + Electrical Engineering Services
- + Industrial Occupational Hygiene
- + Mechanical Sampling
- + Water and Soil Testing
- + Dust Monitoring
- + Information Quality- Digital Engineering and Asset Management
- + OT Cybersecurity, IS / Safety & Automation



Construction Material Testing



Ensure materials meet specification, reduce rework and support safe, compliant construction

During planning and construction, material quality directly impacts structural integrity, safety and project performance. Accurate testing and verification are critical to ensuring materials meet specification, preventing defects and avoiding costly rework.

We provide NATA-accredited (ISO/IEC 17025) construction materials testing to support mine site development. Our technicians deliver reliable, timely results across site and laboratory environments, helping you maintain quality, manage risk and keep construction progressing.

Testing can be conducted on-site, in remote locations or through our laboratory network, ensuring consistent results aligned with construction timelines.

Key capabilities include:

- Concrete, shotcrete and grout testing including strength, workability and durability
- Aggregate and sand testing for grading, density, durability and contaminants
- Rock testing including strength, density, porosity and abrasivity
- Masonry, brick and block testing for structural performance and durability
- Site and remote laboratory capability including compaction, moisture and CBR testing

Supply Chain, Fabrication & Materials Testing Services



Verify component quality, reduce rework and prevent delays across the supply chain.

During planning and construction, failures in procurement, fabrication or material quality can lead to delays, rework and increased project costs. Independent verification is critical to ensuring components meet specification before they reach site.

We provide end-to-end supply chain and fabrication assurance, verifying the quality and integrity of materials and components throughout procurement and delivery. Our inspectors and NATA-accredited laboratories confirm compliance with AS/NZS and international standards prior to installation, helping reduce risk and maintain project timelines.

Key capabilities include:

- Vendor surveillance to verify supplier quality, workmanship and compliance
- Welding inspection covering procedures, qualifications and completed welds
- Dimensional verification to confirm components meet design tolerances
- Materials testing across metals, polymers and industrial components
- Conformity assessment from manufacturing through to final inspection and sign-off



Non-Destructive Testing



Identify defects early, reduce rework and support safe, compliant construction

During planning and construction, undetected defects in materials and fabrication can lead to rework, delays and increased project risk. Non-destructive testing (NDT) provides critical verification that components meet specification before installation.

We deliver NDT services across mining infrastructure, plant and equipment, supporting supplier validation and fabrication quality. Our certified inspectors apply recognised methods aligned with Australian and international standards to identify defects early and support compliant construction.

Key capabilities include:

- Inspection of welds, materials and fabricated components prior to installation
- Detection of cracks, corrosion, inclusions and other material defects
- Fabrication and construction-phase inspection to verify quality and compliance
- Application of multiple NDT methods including ultrasonic, radiographic, magnetic particle and dye penetrant testing
- Reporting aligned with Australian and international NDT standards

Redback™ Drilling Tools & Manufacturing



Precision-engineered drilling tools that improve drilling performance, reduce equipment wear and minimise downtime

Redback™ Drilling Tools & Manufacturing, part of the SGS Group, provides precision machining, inspection and refurbishment services for high-performance downhole drilling equipment.

Operating from facilities in Wingfield (SA) and Toowoomba (QLD), we design, manufacture and repair drilling tools to meet site-specific requirements. Components, including the Redback™ Roller Reamer, are produced using certified, traceable materials under stringent quality assurance processes.

Our patented wedge-lock technology helps reduce torque, vibration and wear within drilling assemblies, while advanced CNC machining ensures consistent performance and fit-for-purpose design. Local refurbishment services support fast turnaround and help extend asset life without unnecessary downtime.



Electrical Engineering Services



Verify system performance, reduce commissioning risk and support safe, compliant operation

During planning and construction, electrical systems must be correctly installed, tested and verified before commissioning. Failures at this stage can lead to delays, safety risks and costly rework.

We provide electrical engineering services to support installation, testing and commissioning of mine site infrastructure. Our specialists deliver independent inspection, testing and advisory services to confirm systems meet performance, safety and regulatory requirements prior to operation.

Key capabilities include:

- Power system testing and commissioning to verify performance prior to handover
- Transformer testing and oil analysis to assess condition and detect faults
- Inspection and testing of switchgear, circuit breakers, protection systems and HV cables
- Testing of motors, rotating equipment and motor control systems
- Thermography and condition monitoring to identify defects in installed systems
- PPE testing and meter calibration to support safe electrical operations

Industrial Occupational Hygiene



Manage exposure risks, support compliance and maintain safe working conditions

Construction activities introduce a range of occupational health risks, including respirable dust, silica, noise, chemical exposure and hazardous materials in existing structures. Early identification and control of these risks is critical to maintaining a safe work environment and meeting regulatory requirements.

We support construction projects with monitoring, analysis and practical controls to help manage exposure risks and maintain compliance throughout the build phase.

Key capabilities include:

- Airborne contaminant monitoring for respirable dust, silica and asbestos during site preparation and construction
- Hazardous materials assessment including lead, heavy metals, isocyanates and organic vapours
- NORM and radiation exposure analysis using ASSET™ EZ4-NCO dry sampling
- Physical hazard assessment covering noise, vibration, heat stress and illumination
- Chemical contaminant monitoring including PFAS, dioxins and metals in soils and construction materials
- Verification of control measures including ventilation, hearing conservation and respiratory protection



Mechanical Sampling



Ensure representative sampling, reduce bias and support accurate data from the start of operations

Accurate sampling is critical to ensuring reliable data and avoiding bias in downstream analysis and commercial transactions. During planning and construction, sampling systems must be correctly designed, installed and validated to meet required standards and operating conditions.

We design, install and commission Mechanical Sampling Systems (MSS) that deliver representative, probability-based samples aligned with ISO and ASTM standards. With more than 40 years of global experience, we ensure systems are fit-for-purpose, compliant and ready to perform from the start of operations.

Key capabilities include:

- System design and commissioning to ISO, ASTM and site-specific requirements
- Bias and precision testing, validation and calibration of sampling systems
- Integrated sample analysis and performance monitoring
- Online analysis to support blending, sorting and process control
- On-site operational and maintenance support from trained technicians

Water and Soil Testing



Support compliant site development, manage construction risk and protect environmental values

We provide comprehensive water and soil testing services during the planning and construction phase to support compliant site development, infrastructure works and early operational readiness.

Our NATA-accredited (ISO/IEC 17025) laboratories delivers reliable data through integrated field sampling, laboratory analysis and reporting.

We support groundwater, surface water and soil testing programs to confirm baseline conditions are maintained, assess impacts from earthworks and construction activities, and support regulatory compliance. Our services inform water management plans, construction controls and early monitoring frameworks, helping reduce environmental risk and support a smooth transition into operations.



Dust Monitoring



Independent dust monitoring to support compliant and responsible construction

We provide ambient air and dust monitoring services to help mining projects quantify, manage and report dust emissions during planning and construction activities.

Sampling and analysis are performed to international standards through our ISO/IEC 17025 accredited laboratories, delivering reliable data to support environmental controls, compliance reporting and responsible site development.

Key capabilities include:

- Dust deposition sampling to determine average dust concentrations over one month, with additional analysis of heavy metals, dioxins and furans available on the same samples
- Total suspended particulate (TSP), PM-10 and PM-2.5 sampling and analysis to assess fine inhalable fractions of suspended dust particles
- Passive sampling providing average pollution concentrations over weekly to monthly periods, suitable for routine monitoring programs
- Fixed and mobile real-time monitoring stations measuring PM10, PM2.5, SO₂, NO_x and CO, with data validated through regular QC and calibration checks

Information Quality (IQ)



Improve data integrity, reduce rework and ensure assets are ready for safe, efficient commissioning

Information Quality (IQ), part of the SGS Group, supports mining projects by ensuring engineering, asset and operational information is structured, governed and applied consistently from detailed design through to commissioning readiness.

By integrating data from digital engineering systems, construction activities, inspections and field updates, we establish a single, reliable source of truth for engineering integrity and asset readiness. This supports project control, regulatory compliance and enables a smooth transition from construction into commissioning and operations

Key capabilities include:

- Digital engineering and digital delivery to configure and administer 2D and 3D design systems, ensuring engineering information is complete, and controlled throughout construction
- Engineering information management and data governance to maintain accuracy, traceability and alignment across engineering, procurement, construction and commissioning systems
- Asset management and master data development to establish maintenance strategies, asset hierarchies and materials data aligned with CMMS and ERP systems
- Completions and commissioning readiness support to ensure construction data is accurate, complete and ready for handover
- Management of change and back-drafting to maintain alignment between design intent, installed assets and evolving project requirements
- Strategic advisory to reduce rework, improve constructability and support transition into operations



OT Cybersecurity, IS / Safety & Automation



Build and validate secure, operationally ready systems

We support project delivery by embedding secure-by-design principles, functional safety assurance and automation expertise to support compliance, reduce delivery risk and enable a smooth transition to operations.

Key capabilities include:

• OT Cybersecurity

- Secure-by-design architecture reviews and ICS/OT risk assessments
- IEC/ISA 62443 gap assessments and capital project cybersecurity requirements
- OT network segmentation, firewall design and secure remote access implementation
- Secure commissioning support including FAT/SAT cyber validation
- ICS asset discovery and network visibility
- Industrial monitoring integration (NIDS/SOC) for early threat detection
- Vulnerability and patch risk management
- Operational resilience planning including BCP/DR validation
- Third-party and vendor access governance
- Legacy system risk management and integration into new environments

• IS / Safety

- Functional safety lifecycle support including PHA, LOPA, SRS and SIS design and engineering
- Functional Safety Assessments (FSA) across all lifecycle stages
- Commissioning support, validation and FAT/SAT test procedures
- Alarm philosophy development, rationalisation and system benchmarking
- Fire and gas (F&G) mapping studies

• Automation

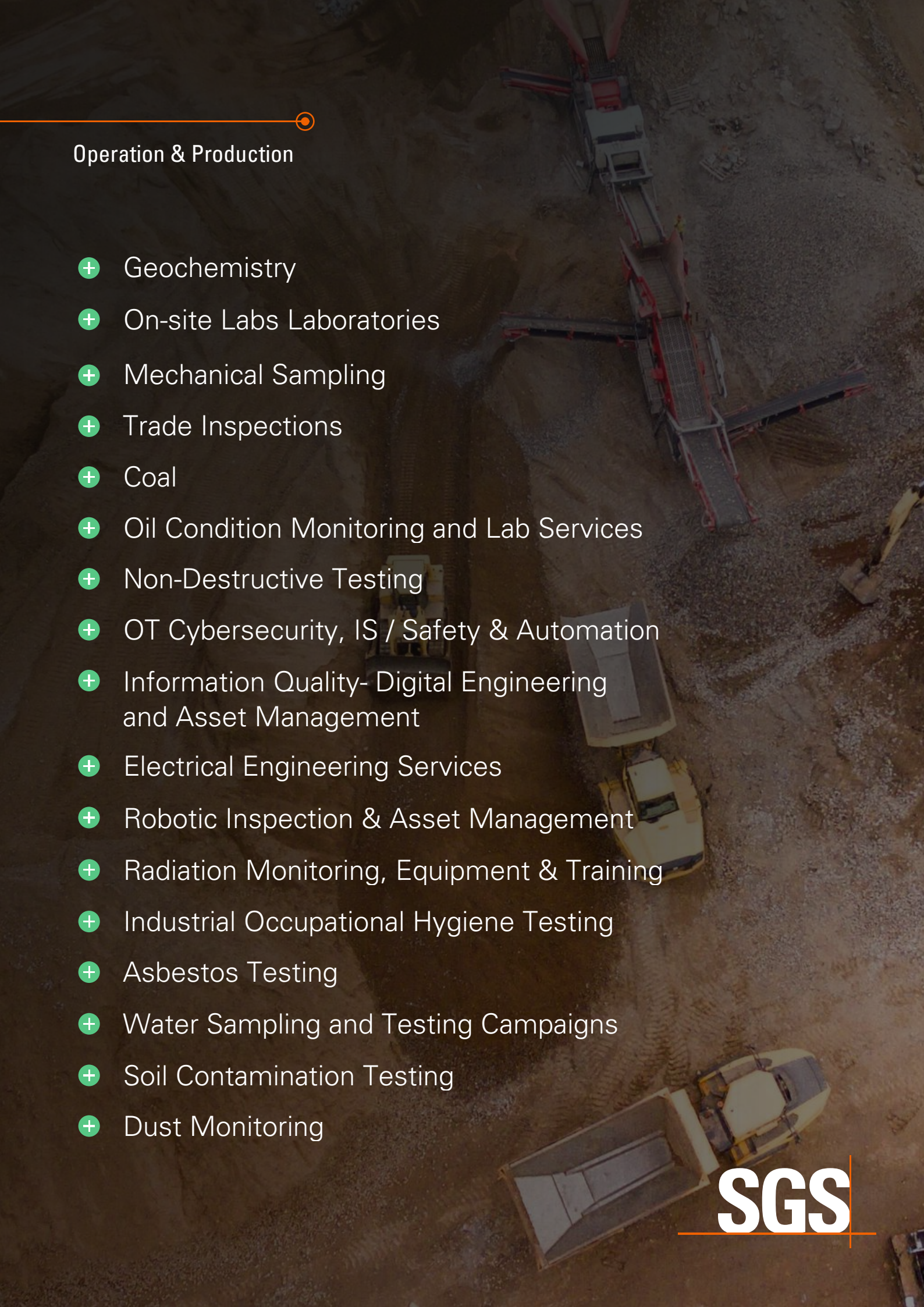
- Control and safety system design, implementation and integration (greenfield and brownfield)
- Independent verification and validation of control and safety systems
- SCADA and HMI design and implementation
- Commissioning and site acceptance testing (SAT)
- Asset information and OT documentation (as-builts and registers)
- Systems audit, preventative maintenance and operational support (8x5 / 24x7)
- System obsolescence planning and lifecycle management

An aerial photograph of a large-scale mining or construction site. The terrain is heavily excavated, showing deep tracks from heavy machinery. Several yellow dump trucks are visible, some parked and others in motion. A large red conveyor system is positioned in the upper center. In the background, there are large concrete structures and more equipment. The overall scene depicts a busy industrial environment.

Operation & Production

In operations, performance, consistency and control are critical. Variability, downtime and quality issues can quickly impact production, cost and contractual outcomes.

We support mining operations with integrated testing, inspection and advisory services delivered on-site, near-site and through our laboratory network. Our teams provide reliable data and technical expertise to help optimise processes, maintain compliance and keep operations performing as expected.



Operation & Production

- + Geochemistry
- + On-site Labs Laboratories
- + Mechanical Sampling
- + Trade Inspections
- + Coal
- + Oil Condition Monitoring and Lab Services
- + Non-Destructive Testing
- + OT Cybersecurity, IS / Safety & Automation
- + Information Quality- Digital Engineering and Asset Management
- + Electrical Engineering Services
- + Robotic Inspection & Asset Management
- + Radiation Monitoring, Equipment & Training
- + Industrial Occupational Hygiene Testing
- + Asbestos Testing
- + Water Sampling and Testing Campaigns
- + Soil Contamination Testing
- + Dust Monitoring



Geochemistry



Improve recovery, manage variability and maintain consistent, efficient plant performance

In production, ore variability directly impacts recovery, throughput and product quality. Understanding the geochemical characteristics of material is critical to maintaining stable, efficient operations.

We provide geochemical analysis to give clear visibility of ore characteristics and how they vary across the operation. By connecting sampling and laboratory data, we help you respond to changing conditions, optimise blending strategies and maintain consistent output.

Key capabilities include:

- Grade control and geochemical analysis to support blending and ore control
- Process-aligned sampling and analysis to monitor material variability
- Geochemical characterisation to understand ore variability across the operation
- Troubleshooting support to identify causes of variability and performance fluctuations
- On-site and near-site testing with rapid turnaround for operational decisions
- Integration with operational data systems to improve visibility and control
- Access to results through the SGS MYLab portal, enabling timely data visibility and streamlined reporting



On-site and Commercial Laboratories



Improve turnaround times, maintain data visibility and support efficient, controlled operations

We operate one of Australia's most extensive networks of on-site laboratories, providing the speed, control and technical capability to support operational decision-making.

Our integrated on-site and commercial laboratory services deliver accurate, consistent results across all major commodities. By aligning analytical methods to your deposit and process, we help optimise sample workflows, reduce turnaround times and maintain visibility over your data.

Locating analytical capability closer to your operation reduces reliance on sample transport, supporting more efficient workflows and lowering associated logistics costs.

All laboratories operate to ISO/IEC standards and are supported by our broader network for specialist analysis and surge capacity.

Key capabilities include:

- Design, commissioning and management of on-site laboratory operations aligned to your process
- Scalable commercial laboratory support for peak volumes and specialised analysis
- FAST (Field Analytical Services & Testing) including XRF, NIR and pXRF for rapid, site-based results
- Metallurgical and geometallurgical testing including comminution and material profiling
- Workforce solutions including experienced personnel, remote support and flexible staffing models
- Optimised procurement and logistics to support efficient operations

Mechanical Sampling



Improve data accuracy, reduce sampling bias and support consistent product quality

Accurate sampling underpins product quality, process control and commercial outcomes. Poor sampling introduces bias, impacting grade determination, plant performance and contractual reporting.

Our Mechanical Sampling Systems (MSS) deliver representative, probability-based samples aligned with ISO and ASTM standards, reducing bias and improving confidence in material data.

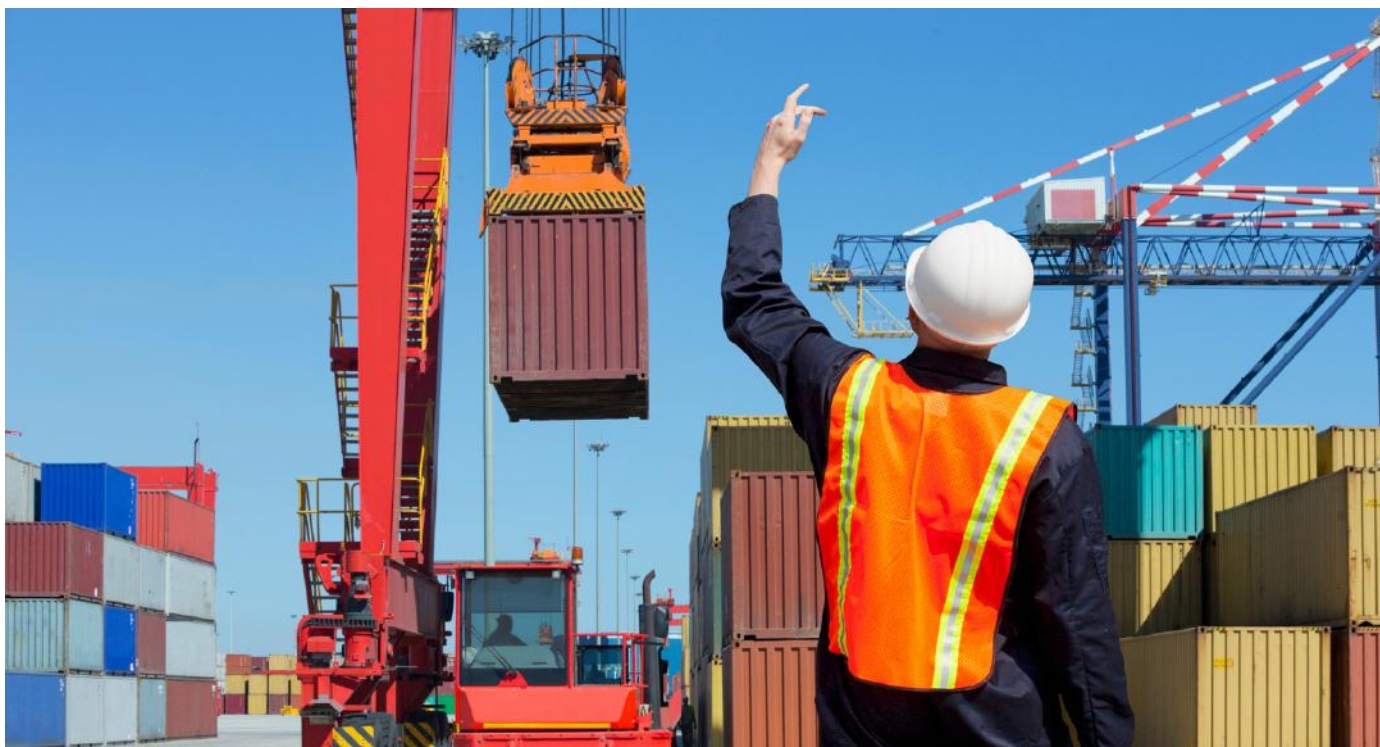
With more than 40 years of global experience, we design, install and support MSS tailored to your material characteristics and operating conditions, helping maintain consistent, reliable sampling across the production chain.

Key capabilities include:

- System design and commissioning to ISO, ASTM and site-specific requirements
- Bias and precision testing, validation and calibration of sampling systems
- Integrated sample analysis and performance monitoring
- Online analysis to support blending, sorting and process control
- On-site operational and maintenance support from trained technicians



Trade Inspection



Ensure accurate quality and quantity determination, reduce disputes and protect commercial value across the supply chain

As commodities move from site to market, accurate determination of quality and quantity is critical. Variability, handling and measurement errors can lead to disputes, financial loss and reputational risk.

We provide independent trade inspection, sampling and analysis services across the mining supply chain, supporting accurate valuation and compliance with contractual and regulatory requirements. By combining inspection, sampling and testing, we help protect product integrity and provide confidence in every shipment.

Key capabilities include:

- **Quality Inspection**

- Pre-shipment inspection to verify cargo quality and specification
- Hold cleanliness inspections and bunker/conditional surveys
- Damage surveys, witnessing and due diligence inspections

- **Sampling Services**

- Representative sampling aligned with international standards
- Design of sampling protocols for specific materials and conditions
- Sampling audits and supervision during loading, transfer and discharge

- **Quantity Verification**

- Draft surveys and cargo measurement
- Stockpile and inventory management, including precious metals
- Verification and calibration of weighing systems
- Cargo surveys and tally

- **Analysis & Testing**

- Pre-shipment testing and commercial sample preparation
- Moisture and size distribution analysis
- Exchange and umpire analysis
- Transportable Moisture Limit (TML) and Flow Moisture Point (FMP) testing

Coal



Verify product quality, optimise plant efficiency and reduce commercial and operational risk

We provide integrated testing, inspection and advisory services to support coal operations across production, processing and shipment. With laboratories located across key coal regions in Queensland and New South Wales, we deliver timely, reliable data to help optimise performance, maintain consistent quality and meet contractual requirements.

Our teams work alongside your operation to support efficient plant performance, consistent output and confidence in product quality as coal moves through the value chain.

Key capabilities include:

- Laboratory testing including proximate and ultimate analysis, ash and mineral analysis, washability, coke strength and reactivity, petrography and Hardgrove Grindability Index (HGI)
- On-site laboratory design, operation and integration with commercial laboratories for fast, consistent results
- Mechanical and manual sampling, bias and precision testing, and system maintenance
- Coal wash plant services including plant audits, efficiency testing, optimisation and troubleshooting, heat accounting and material balancing
- Inspection services including pre-shipment inspection, load and discharge supervision, draft surveys and quality and quantity verification
- Quality assurance programs including proficiency testing, audits, training and tailored QA programs



Integrated Oil Condition Monitoring & Laboratory Services



Protecting equipment health and process chemistry across your operation

Oil Condition Monitoring

Oil Condition Monitoring helps mining operators protect critical plant and equipment, including haul trucks, excavators, generators, gearboxes, compressors and transformers by identifying early signs of wear, contamination and oil degradation before they result in costly failure. As a NATA-accredited laboratory, we provide comprehensive analysis of lubricating oils, greases and hydraulic fluids with clear, actionable recommendations to support condition-based servicing, extend equipment life and prevent unplanned downtime.

With fast turnaround times from 48 hours and digital reporting via the SOFIA platform, operators across remote and regional mine sites can maintain consistent testing schedules and make informed maintenance decisions with confidence, reducing repair costs, minimising unnecessary oil changes and keeping critical assets running at peak performance.

Oil Analysis Services

We provide integrated onsite and reference laboratory services to support energy production operations across Australia, focusing on process chemistry and regulatory compliance for facilities. Our services include deployment of onsite chemists and mobile field teams, chemicals optimisation, analysis of fuels and chemical fluids, and support testing of process waters, reagents and plant utilities, and contamination control and filtration optimisation, drinking water and dosing.

Non-Destructive Testing



Maintain asset integrity, reduce unplanned downtime and support safe, reliable operations

We provide non-destructive testing (NDT) services to help mining operators identify defects and deterioration before they impact safety, performance or production. Early detection is critical to maintaining asset integrity and avoiding costly failures.

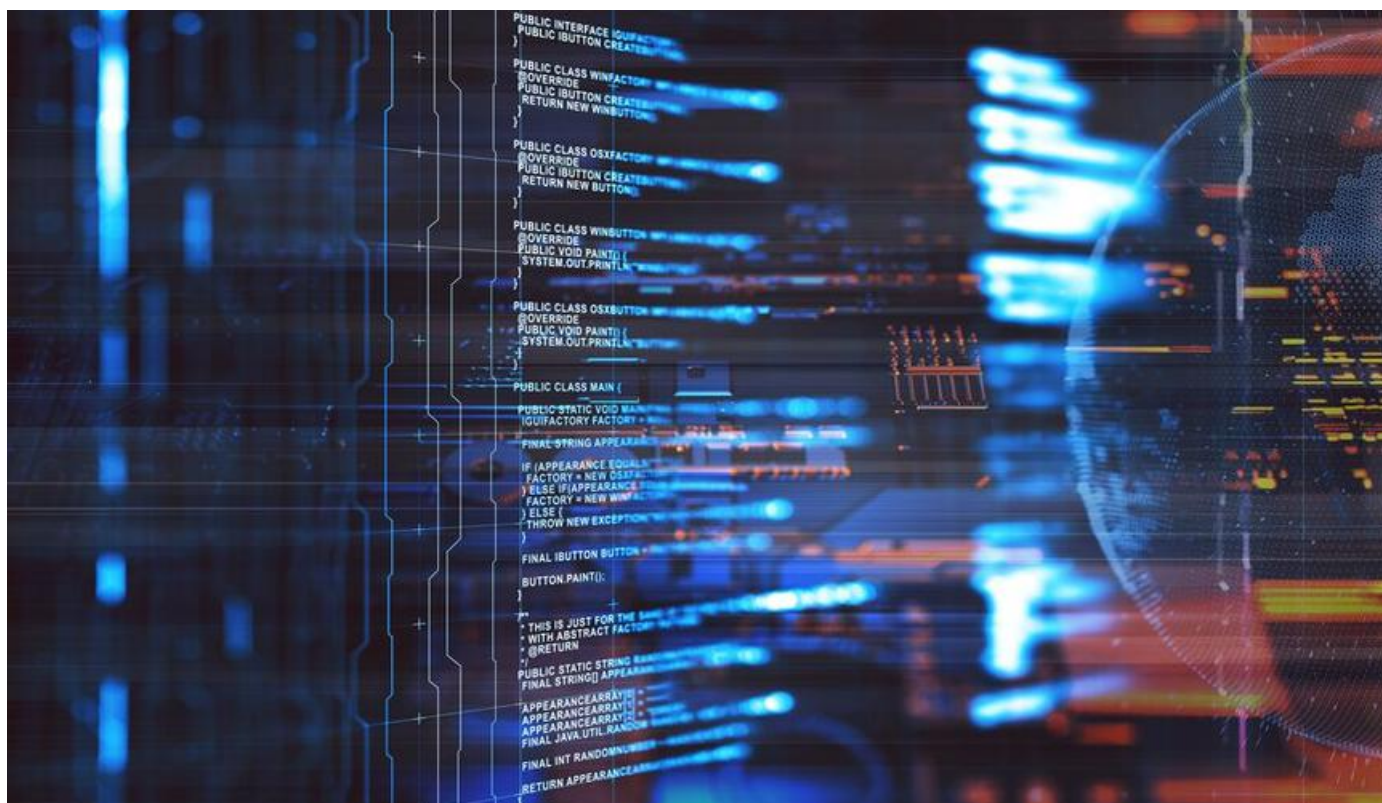
Our certified inspectors deliver inspection services across critical plant, equipment and infrastructure throughout their operational life, in accordance with Australian and international standards.

Key capabilities include:

- Intrusive and non-intrusive inspection of plant, pipelines, pressure vessels and structural steelwork
- Detection of cracks, corrosion, weld defects and material flaws
- In-service inspection to support maintenance planning and reduce downtime
- Thermography and condition surveys to identify hotspots and mechanical deterioration in live equipment
- Inspection reporting aligned with Australian and international standards



OT Cybersecurity, IS / Safety & Automation



Maintain system integrity, reduce operational risk and support safe, reliable production

We protect operational technology environments across mining operations using a risk-based approach aligned with control systems and infrastructure. By integrating cybersecurity, functional safety and automation support, we help maintain system integrity, reduce operational risk and support safe, reliable production.

Key capabilities include:

• OT Cybersecurity

- Architecture reviews, ICS/OT risk assessments and IEC/ISA 62443 gap assessments
- Implementation of network segmentation, firewalls and secure remote access
- ICS asset discovery, network visibility and industrial monitoring (NIDS/SOC integration)
- Vulnerability, patch and legacy system risk management
- Operational resilience planning, business continuity and disaster recovery (BCP/DR)
- Third-party and vendor access governance

• IS / Safety

- Functional safety lifecycle support including PHA, LOPA, SRS and SIS design
- Commissioning support, validation and Functional Safety Assessments (FSA)
- Alarm philosophy development and fire and gas (F&G) mapping

• Automation

- Control and safety system design, verification and validation
- SCADA and HMI support, commissioning and site acceptance testing
- Asset information and OT documentation, system audits and preventative maintenance
- Operational call-out support (8x5 / 24x7)
- System obsolescence planning and lifecycle management

Information Quality (IQ)



Improve data quality, increase visibility and support more effective, data-driven operational decisions

Information Quality (IQ), part of the SGS Group, supports mining operations by improving how asset and operational data is structured, governed and used across site systems.

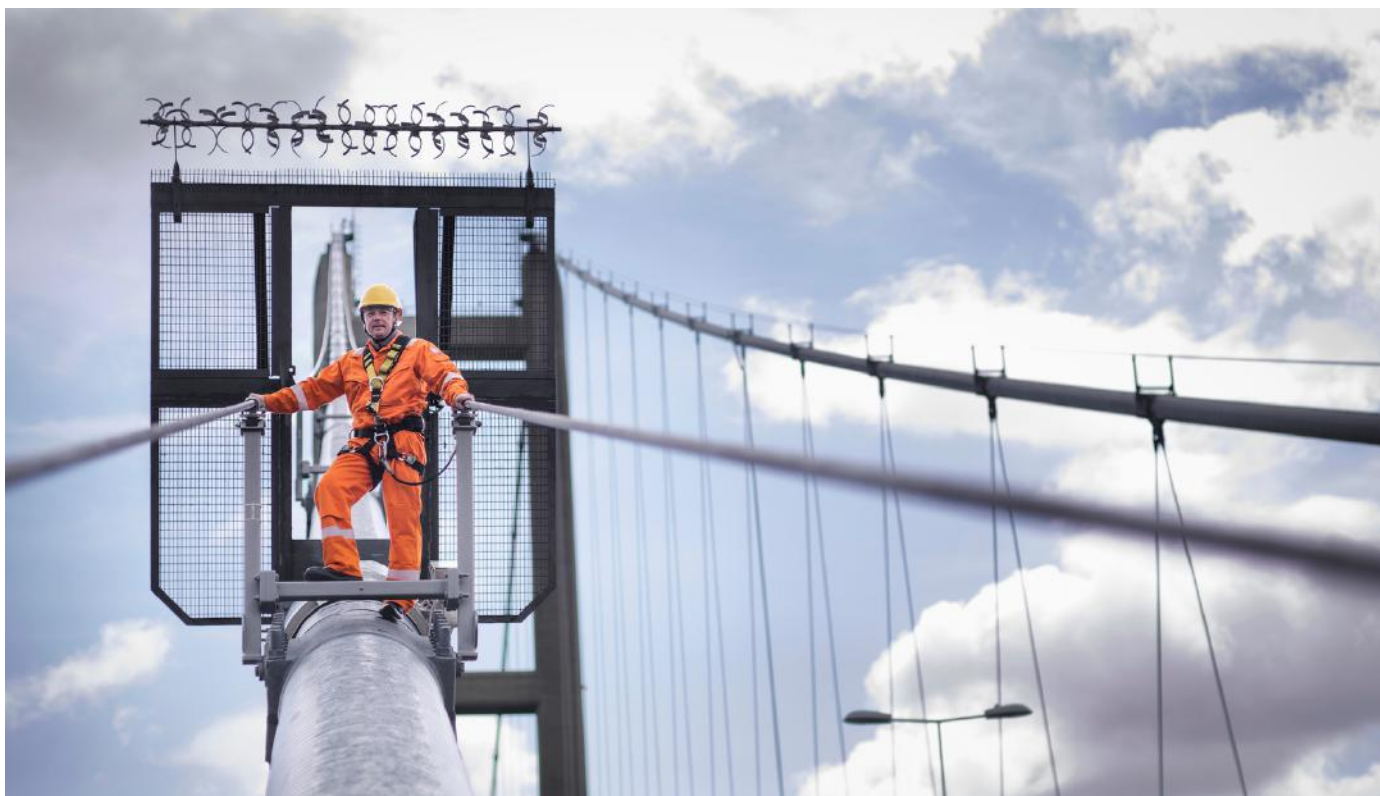
By integrating data from engineering systems, inspections, sensors and field activities, IQ provides a single, reliable view of asset condition, risk and performance. This supports maintenance planning, compliance and day-to-day operational control.

Key capabilities include:

- Digital engineering support to ensure asset information remains complete, consistent and usable after handover
- Information management and data governance to maintain data accuracy, traceability and integrity across operational systems
- Maintenance and materials master data optimisation within ERP/EAM systems (e.g. SAP) to improve planning, scheduling and inventory control
- Integration of inspection, laboratory, drone, GIS and condition monitoring data into a unified operational view
- Asset health and reliability analysis to support condition monitoring and proactive maintenance strategies
- Automated reporting to support regulatory, compliance and operational requirements



Electrical Engineering Services



Enhance reliability, minimise downtime and protect critical electrical assets across operations.

We provide electrical engineering services to support the reliability, safety and performance of critical electrical systems across mining operations. Maintaining asset condition and identifying issues early is essential to avoiding unplanned outages and production disruption.

Through independent testing, inspection and condition monitoring, our specialists support preventative and condition-based maintenance strategies that improve uptime and maintain safe, compliant operations.

Key capabilities include:

- Power system testing, commissioning and preventative maintenance to support reliable operation
- Transformer testing and oil analysis to assess condition and detect early signs of failure
- Inspection and testing of switchgear, circuit breakers, protection systems and HV cables
- Testing of rotating equipment including motors and motor control systems
- Thermography and condition monitoring to identify hotspots and equipment deterioration
- PPE testing and meter calibration to support safe and accurate electrical operations

Robotic Inspection & Asset Management

Improve inspection safety, reduce downtime and support proactive maintenance and asset reliability

Fulcrum Robotics, part of the SGS Group, delivers robotic inspection solutions that provide safe, accurate insight into the condition of critical mining infrastructure.

By enabling inspection in hazardous, remote and hard-to-access environments, we help assess asset condition, identify defects early and maintain reliable operations without unnecessary shutdowns or risk to personnel.

Key capabilities include:

- Aerial inspections of structures, stockpiles and elevated infrastructure to support defect detection and reliability
- Confined space inspections of tanks, ducts and enclosed assets without shutdowns or human entry

- Submersible inspections of water-filled or inaccessible infrastructure
- High-resolution data capture including visual, thermal and 3D imaging for condition assessment
- Integration with asset management systems to support maintenance and risk management workflows

Integrated support includes:

- Visual and condition assessments to identify wear, corrosion and structural risks
- Non-destructive testing and thermographic surveys for in-service verification
- Compliance and safety audits to support regulatory and operational requirements



**Aerial Systems
(UAVs)**

Performing detailed aerial imaging, thermal inspections, and photogrammetry surveys.



**Terrestrial Systems
(UGVs/Crawlers)**

Utilised for confined-space access in tanks, ducts, and pipelines with zero operational impact.



**Subsea Systems
(ROVs)**

Conducting inspections of submerged pipelines, potable water reservoirs and marine infrastructure.



Radiation Monitoring, Equipment & Training



Support safe operations, maintain compliance and manage radiological risk across your site

We provide radiation monitoring, analytical services, equipment support and training to help mining operations manage radiological risk and meet regulatory requirements.

Our integrated approach combines testing, monitoring and practical support to maintain safe operating conditions and ensure compliance across radiation-controlled environments.

Radiation Analytical Services

We deliver ongoing monitoring and specialist analysis to assess radiological conditions across your operation and support compliance with regulatory requirements.

Key capabilities include:

- Routine monitoring of water, soil, ores, dust and waste for radioactivity and radionuclides, including NORM, uranium and thorium series, radon and thoron, gross alpha and beta, and Cs-137, Sr-90 and Am-241
- Instrument calibration and repair for dose rate monitors, personal and area monitors, environmental monitors and portable gauges
- Personal radiation monitoring including Beta, Gamma and Neutron badges, TLD rings and Instadose systems

- Source management and disposal in line with regulatory requirements
- Supply of radiation monitoring equipment including handheld survey monitors, neutron monitors, x-ray equipment, shielding equipment, radioactive isotopes, air sampling equipment and personnel radiation portal monitors

Radiation Safety Training

We provide practical, industry specific training to ensure personnel understand and manage radiation risks in operational environments.

Key capabilities include:

- Accredited training for radiation equipment and applications including fixed radiation gauges, XRF/XRD and cabinet X-ray, borehole and wireline logging, portable gauges, industrial radiography.
- Radiation awareness, NORM handling, and safe transport of radioactive materials and, workplace radiation exposure
- Training aligned with regulatory requirements and personnel licencing
- Radiation Safety Officer support, including on-site audits, compliance assessments

Industrial Occupational Hygiene



Monitor exposure, protect workers and maintain compliance

Mining environments present complex occupational hygiene risks including respirable dust, silica, NORM, noise, heat stress and chemical contaminants. We support mining operators with accurate monitoring, expert analysis and practical controls to manage workplace health risks and meet regulatory requirements.

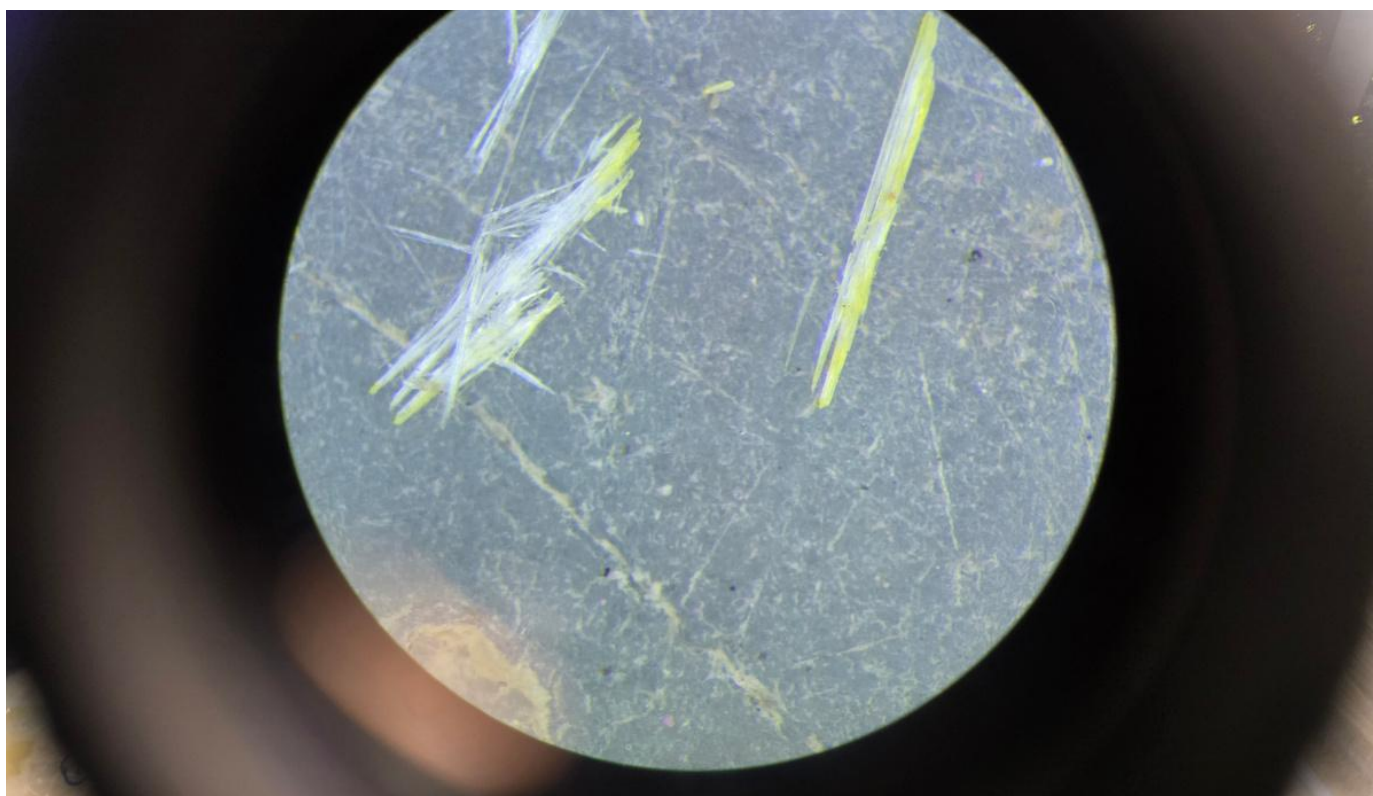
With more than 50 years of experience, and a national network of NATA accredited (ISO/IEC 17025) laboratories, we deliver programs aligned with Australian regulations and industry best practice.

Key capabilities include:

- Respirable dust & silica monitoring across drilling, blasting, crushing and processing
- Asbestos monitoring and airborne fibre analysis across mine site air, filters, respirable dust, particulate and wipe samples
- NORM & radiation exposure analysis using ASSET™ EZ4-NCO dry sampling
- Chemical contaminant monitoring including PFAS, dioxins and rare metal contaminants
- Physical hazard assessment covering noise, heat stress, vibration, illumination and radiation measurement
- Airborne monitoring including ambient and workplace air, emissions, ventilation, soil gas and vapour
- Exposure monitoring and profiling, trend analysis and compliance verification
- On-site laboratory capability with real-time digital reporting through the SGS online portal and LIMS



Asbestos Testing



Maintain safe working conditions, support compliance and manage asbestos risk without disrupting operations

Asbestos remains an ongoing risk in operational environments, particularly across legacy infrastructure and disturbed materials. We provide monitoring and testing services to help you identify, assess and manage asbestos exposure risk while maintaining compliance with regulatory requirements.

Our NATA-accredited (ISO/IEC 17025) laboratories deliver accurate, reliable results to support safe work practices and ongoing site management.

Key capabilities include:

- Airborne fibres monitoring across operational areas and activities
- Sampling and analysis of soil, dust and suspect materials
- Identification and classification of friable and non-friable materials
- Clearance testing following maintenance or remediation works
- Ongoing monitoring programs to support compliance and risk control
- Fast turnaround and digital reporting to support operational decisions.

Water Sampling and Testing Campaigns



Maintain compliance, support water management and protect environmental and operational performance

We provide water sampling and testing services to support operational activities across mine sites. Ongoing monitoring is critical to protecting the environment and human health, verifying treatment performance and meeting regulatory obligations.

With an established network of sampling teams and NATA-accredited (ISO/IEC 17025) laboratories, we deliver accurate, defensible data through integrated field sampling, laboratory analysis and reporting. Our services support compliance monitoring, operational control and audit readiness across potable, environmental and process water programs.

Key capabilities include:

- Potable water sampling and testing aligned with Australian Drinking Water Guidelines
- Wastewater and trade waste testing to verify discharge and licence conditions
- Groundwater and surface water monitoring to protect environmental receptors
- Environmental water monitoring programs to support compliance
- National Pollutant Inventory (NPI) sampling and analysis
- Routine and event-based sampling campaigns using recognised methodologies
- Clear, auditable reporting to support compliance and operational control



Soil Contamination Testing



Assess contamination, support incident response and maintain environmental compliance

We provide soil testing services to support operational activities, incident response and contamination investigations across active mine sites. Unplanned events such as spills or leaks can impact soil quality, making timely and accurate testing critical to identify risk, inform response actions and maintain compliant operations.

Our ISO/IEC 17025 accredited laboratories deliver reliable, defensible data using recognised analytical methods to support environmental management and regulatory requirements.

Key capabilities include:

- Soil analysis for hydrocarbons, metals, inorganics, organics, asbestos, acid sulfate soils and unknown contaminants
- Sampling and testing to support contamination investigations and event-based incidents
- Reporting aligned with regulatory and environmental guideline requirements
- Accredited laboratory analysis delivering defensible results for compliance and site management

Dust Monitoring



Maintain compliance, support environmental reporting and manage dust-related risk across operations

We provide ambient air and dust monitoring services to help mining operations quantify, manage and report dust emissions during production.

Sampling and analysis are performed to international standards through our ISO/IEC 17025 accredited laboratories, delivering reliable, defensible data to support operational control, compliance reporting and audit readiness.

Key capabilities include:

- Dust deposition monitoring to measure average concentrations over defined periods, with optional analysis of metals, dioxins and furans
- Total suspended particulate (TSP), PM₁₀ and PM_{2.5} sampling and analysis to assess inhalable dust fractions
- Passive sampling to provide average pollutant concentrations over weekly to monthly monitoring programs
- Fixed and mobile monitoring stations measuring PM₁₀, PM_{2.5}, SO₂, NO_x and CO, supported by routine calibration and quality control



Protect product quality and value from site to destination

As materials move from site to port, processing facilities or customers maintaining quality, condition and accurate measurement is critical. Variability, handling issues and inaccurate sampling can impact product value, contractual compliance and customer confidence.

We support transportation with independent inspection, sampling, testing and monitoring services. Our teams provide accurate, timely data and technical expertise to help you verify quality and quantity, reduce risk and maintain confidence in your product throughout the supply chain.



Transportation

- + Trade Inspections
- + Supply Chain, Fabrication & Materials Testing Services
- + Oil Condition Monitoring
- + Asset Management
- + Strategic Advisory & Consultancy
- + OT Cybersecurity, IS / Safety & Automation



SGS



Trade Inspections



Ensure accurate valuation, reduce the risk of disputes and maintain confidence in product quality and quantity throughout transport

As commodities move through the supply chain, accurate determination of quality and quantity is critical to maintaining contractual compliance and protecting commercial value. Variability during handling, loading and transport can introduce risk, making independent verification essential.

We provide trade inspection, sampling and analytical services across transport and logistics stages, ensuring your product meets contractual specifications and arrives as expected. Our independent certification supports transparent transactions and reduces the risk of disputes between parties.

Key capabilities include:

- Pre-shipment inspection to verify cargo quality and specification prior to dispatch
- Loading and discharge supervision to monitor handling, condition and transport readiness
- Sampling and laboratory analysis aligned with ISO, ATSM and industry standards
- Draft surveys and weight verification to determine accurate shipment quantities
- Visual inspection and condition surveys of cargo, vessels and transport systems
- Umpire and settlement analysis to resolve disputes with independent, certified results
- Digital reporting and certification for fast, secure documentation

Supply Chain, Fabrication & Materials Testing Services



Mitigate supply chain risk, validate vendor performance and keep project delivery on track

We provide end-to-end supply chain and fabrication assurance for mining projects, helping verify the quality, compliance and readiness of materials and components at every stage of the procurement and delivery lifecycle. Our inspectors and NATA-accredited laboratories ensure components meet AS/NZS and international standards before installation, reducing risk and preventing costly delays.

Key capabilities include:

- Supplier qualification audits for manufacturers of critical mining equipment and components
- Vendor shop inspections to verify workmanship, standards compliance and factory test results
- Third party QA/QC checks on materials, components and documentation for mining plants and equipment
- Pre-shipment inspection confirming condition, quantity, packing and marking before dispatch
- Loading supervision to ensure correct handling and secure transport of critical mining assets
- Expediting services to keep long lead-time equipment on schedule
- Material conformity & documentation review prior to acceptance or installation



Oil Condition Monitoring



Protecting fleet and vessel assets across the logistics chain

OCM helps mining operators protect the fleet and vessel assets that move product from site to port and market, identifying early signs of wear, contamination and oil degradation before they result in in-transit breakdowns or costly failures. As a NATA-accredited laboratory, we provide comprehensive analysis of lubricating oils, greases and hydraulic fluids with clear, actionable recommendations to support condition-based servicing, extend asset life and prevent unplanned downtime across the logistics chain.

With fast turnaround times from 48 hours and digital reporting via the SOFIA platform, transport operators can maintain consistent testing schedules across remote routes and sites, making informed maintenance decisions with confidence, reducing repair costs, minimising unnecessary oil changes and keeping fleet and vessel assets running at peak performance.

Information Quality (IQ)

Improve asset reliability, reduce transport disruption and support consistent end to end transport performance

Information Quality (IQ), part of the SGS Group, supports mining operators during the transport phase by improving how asset and maintenance data is structured, governed and applied across logistics networks.



Asset Management

We apply asset management and master data governance practices to support reliable transport operations and maintain performance across critical logistic assets.

Key capabilities include:

- Asset management and maintenance strategy development aligned to transport asset criticality and operational risk
- Reliability, availability and maintainability (RAM) inputs to support performance of transport infrastructure, rolling stock and mobile fleet assets
- Maintenance and materials master data optimisation to improve planning, scheduling and spares availability
- Maintenance systems audits and management of change to ensure CMMS/ERP systems reflect actual asset condition
- Asset health, and performance insight to support proactive maintenance and reduce unplanned downtime

Operations Support - Strategic Advisory

We provide strategic advisory support to assess and improve the performance, reliability and resilience of transport operations and asset strategies.

Key capabilities include:

- Advisory to optimise transport operations, maintenance strategies and asset investment decisions
- Operational readiness and sustainment support for transport assets and logistics systems
- Development of practical operating and maintenance methodologies for transport environments
- Standards development and governance to improve consistency, compliance and performance
- Performance optimisation to support reliable transport from site to port or customer



OT Cybersecurity, IS / Safety & Automation



Protect connected logistics systems and ensure safe, reliable movement of assets and materials

Transport operations rely on highly connected control, safety and communication systems operating across distributed environments.

We support transport and logistics by strengthening OT cybersecurity, functional safety and automation controls to reduce risk, maintain reliability and ensure the safe, consistent movement of materials from site to destination.

Key capabilities include:

- **OT Cybersecurity**
 - Architecture reviews, ICS/OT risk assessments and IEC/ISA 62443 gap assessments
 - OT network segmentation, firewall configuration and secure remote access design
 - ICS asset discovery and network visibility to support monitoring and oversight
 - Vulnerability, patch and legacy system risk management
- Operational resilience planning including business continuity and disaster recovery (BCP/DR)
- Third-party and vendor access governance
- **IS / Safety**
 - Functional safety lifecycle support including PHA, LOPA, SRS and SIS design
 - Commissioning support, validation and Functional Safety Assessments (FSA)
 - Alarm philosophy development, rationalisation and benchmarking
- **Automation**
 - Control and safety system design and implementation
 - SCADA and HMI design and implementation
 - Brownfield and greenfield systems integration
 - Commissioning and site acceptance testing (SAT)
 - Asset information and OT documentation

Achieve compliant closure and support regulatory sign-off

Closure and rehabilitation require clear, verifiable evidence that environmental and regulatory obligations have been met. Incomplete monitoring, unresolved risks or insufficient data can delay sign-off, extend bond liabilities and impact your social licence.

We support mine closure and rehabilitation with integrated testing, inspection and monitoring services across environmental, radiological, occupational hygiene and structural disciplines. Our teams provide the data and technical expertise needed to validate remediation outcomes, support regulatory relinquishment and demonstrate responsible stewardship to regulators, investors and communities.



Closure & Rehabilitation

- + Acid Rock Drainage Testing
- + Soil and Water Testing
- + Radiation Testing
- + Industrial Occupational Hygiene
- + Asbestos Testing
- + Non-Destructive Testing
- + Asset Management
- + Digital Delivery & Information Management
- + Digital Engineering
- + Operations Support - Strategic Advisory
- + OT Cybersecurity, IS / Safety & Automation

Acid Rock Drainage Testing



Support closure sign-off, reduce long-term environmental risk and demonstrate stability of rehabilitated materials

We provide static and kinetic ARD testing to assess the long-term behaviour of rehabilitated materials, including waste rock and tailings. Our data supports validation of closure strategies and helps demonstrate that acid generation risks have been effectively managed.



Soil and Water Testing



Confirm rehabilitation performance, support regulatory approval and demonstrate compliant site closure

We provide soil and water testing to support closure and rehabilitation programs, confirming that sites meet environmental and regulatory requirements prior to sign-off.

Our NATA-accredited (ISO/IEC 17025) laboratories deliver accurate, defensible data to support validation of remediation outcomes, ongoing monitoring programs and regulatory reporting. Our services help demonstrate that environmental conditions are stable, compliant and suitable for relinquishment.

Radiation Testing



Demonstrate radiological compliance and support safe, compliant site relinquishment

We provide radiation testing and analysis to support closure and rehabilitation of sites with radiological considerations, ensuring compliance with regulatory requirements.

Our NATA-accredited (ISO/IEC 17025) laboratories and specialists support field sampling, analysis and data interpretation to confirm that radiological conditions meet required standards and that sites are safe for post-closure use.



Industrial Occupational Hygiene

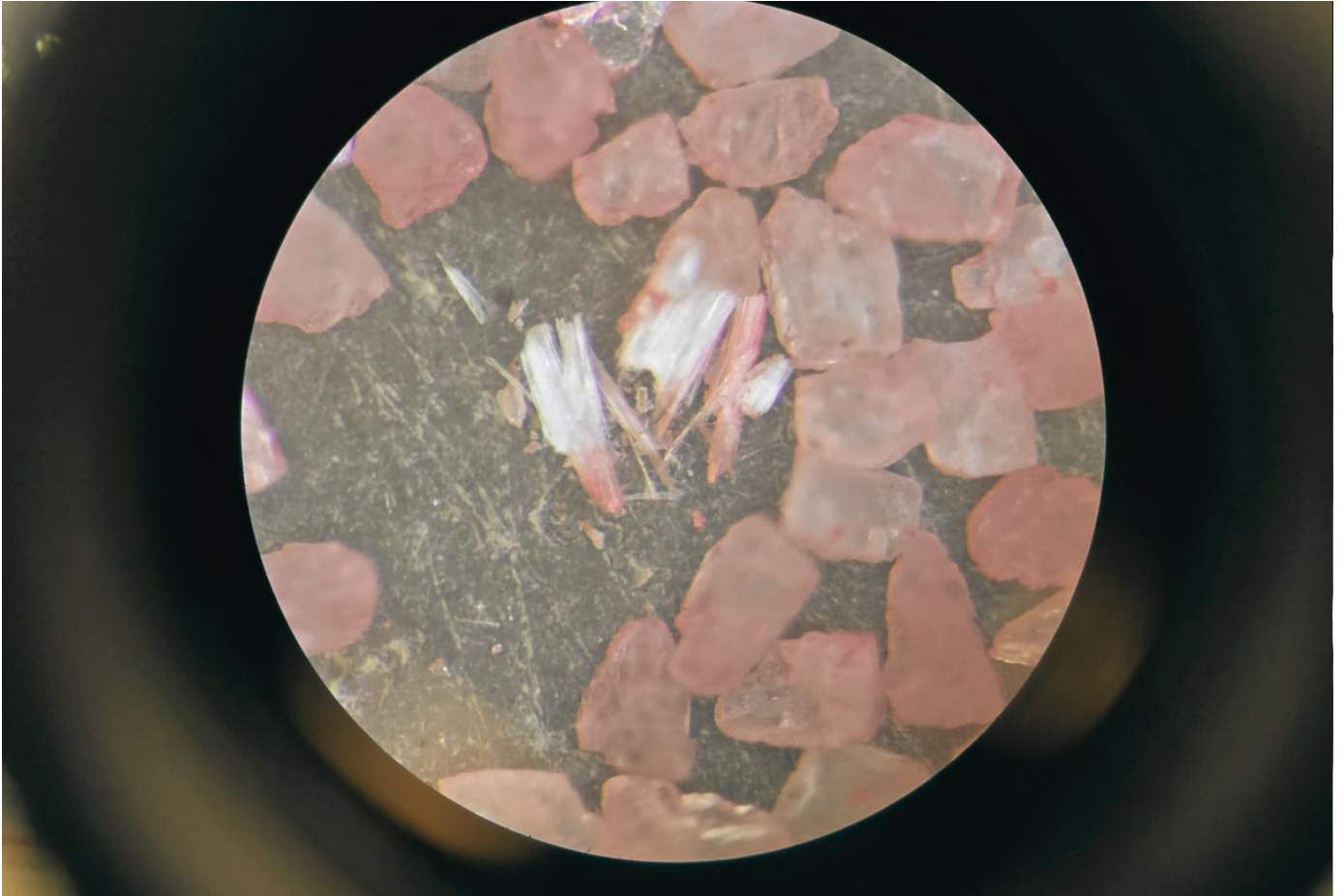


Confirm exposure risks are controlled and support safe, compliant site closure

We provide occupational hygiene monitoring and assessment to support safe closure works and demonstrate compliance with health and safety obligations.

Supported by our national network of NATA-accredited (ISO/IEC 17025) laboratories, we deliver accurate, defensible data to verify exposure controls, assess residual risks and support closure sign-off.

Asbestos Testing



Verify asbestos risks are managed and support compliant closure and site handover

We provide asbestos monitoring and testing services to support safe closure activities and confirm that asbestos risks have been identified, managed and remediated where required.

Our NATA-accredited (ISO/IEC 17025) laboratories deliver accurate, defensible results to support clearance verification, regulatory compliance and responsible site handover.



Non-Destructive Testing



Identify residual integrity risks, support safe decommissioning and enable compliant closure sign-off

We provide non-destructive testing (NDT) services to support safe, compliant decommissioning of mining assets, infrastructure and equipment.

Our services identify defects, deterioration and residual integrity risks prior to demolition or removal, reducing uncertainty and supporting informed closure decisions. Certified inspectors deliver intrusive and non-intrusive inspections aligned with Australian and international standards, providing independent, defensible evidence for closure verification.

Information Quality (IQ)

Trusted information and strategic assurance to support compliant mine closure

Information Quality (IQ), part of the SGS Group, supports mining operators during closure and rehabilitation by ensuring asset, engineering and operational information is accurate, governed and retained as sites transition out of operation. By maintaining a single, reliable source of truth, IQ helps reduce residual risk, support regulatory sign-off and preserve critical knowledge for long-term obligations.

Asset Management

We support closure by ensuring asset and maintenance information reflects the true condition of decommissioned and rehabilitated infrastructure, helping manage residual liabilities and avoid unnecessary long-term costs.

Key capabilities include:

- Review and rationalisation of asset and maintenance strategies for closure activities
- Maintenance master data clean-up to remove redundant or non-applicable requirements
- Reliability and risk-based inputs to support asset retirement decisions
- CMMS and ERP audits to align systems with actual asset condition
- Asset documentation verification to support regulatory sign-off and relinquishment

Digital Delivery & Information Management

We consolidate, validate and govern information across the asset lifecycle to ensure closure records, evidence and obligations are accurate, accessible and auditable.

Key capabilities include:

- Engineering and asset information consolidation for closure reporting
- Information governance frameworks to maintain traceability and auditability
- Document and drawing management to ensure approved, final records
- Digital handover and archiving strategies to support post-closure obligations

Digital Engineering

We ensure engineering data is accurate and aligned with closure outcomes, so records reflect the final state of decommissioned or rehabilitated assets.

Key capabilities include:

- Final verification and rationalisation of engineering data and class libraries
- Management of change and back-drafting to align as-builts with closure outcomes
- Engineering system architecture and access solutions for long-term record use
- Data integrity assurance to support closure certification

Operations Support - Strategic Advisory

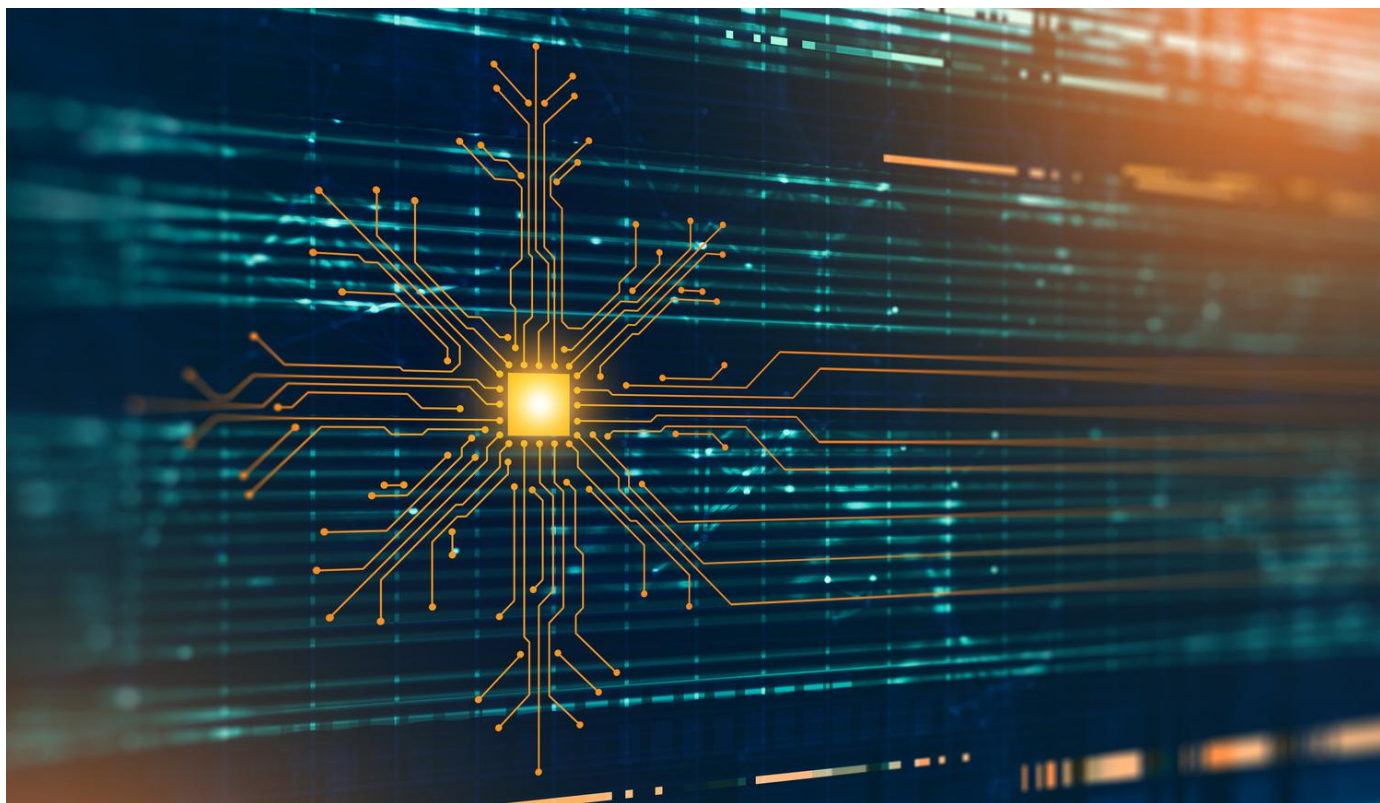
We provide advisory support to ensure closure strategies are practical, compliant and aligned with long-term obligations.

Key capabilities include:

- Advisory support for closure planning, sequencing and risk management
- Readiness support for decommissioning and rehabilitation activities
- Development of practical standards and methodologies for closure execution
- Governance and assurance to reduce over-specification and ongoing obligations



OT Cybersecurity, IS / Safety & Automation



Ensure safe system shutdown, secure data handling and compliant asset decommissioning

We support mine closure and decommissioning by addressing OT cybersecurity, functional safety and automation requirements to ensure systems are retired safely and in compliance with regulatory obligations.

Our services help manage residual risk, protect sensitive data and confirm that assets are decommissioned in a controlled, auditable manner.

Key capabilities include:

- **OT Cybersecurity**
 - Cybersecurity strategy and planning to support safe system retirement
 - ICS and OT risk assessments to identify residual risks prior to shutdown
 - Vulnerability, patch and legacy system risk management during decommissioning
 - Operational resilience planning including business continuity and disaster recovery (BCP/DR)
- Legacy system risk management as assets transition out of service
- Secure decommissioning and data sanitisation of OT and ICS environments
- **IS / Safety**
 - Functional Safety Assessments (FSA) to confirm safe decommissioning and closure
 - Verification of safety systems and controls prior to shutdown
- **Automation**
 - Functional safety lifecycle support aligned with IEC 61511, IEC 62061 and ISO 13849
 - Asset information and OT documentation including final as-builts and registers
 - System obsolescence planning and execution to support safe asset retirement

Business Assurance Solutions

Supporting the mining industry to stay ahead of complex regulatory obligations, industry standards and best practices with the world's most comprehensive range of assessment, auditing, certification and business enhancement solutions.

Management Systems

Mitigate risk, improve operational efficiency and meet regulatory and stakeholder requirements through audits and certification aligned with global, regional and local mining-relevant standards, including:

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 50001

Cybersecurity Assurance

Our digital trust solutions support compliance and strengthen digital resilience with internationally recognised regulations, covering data protection, cloud environments, facility security and readiness for business-critical incidents.

- Infosec Essentials
- ISO/IEC 27001 Information Security
- ISO/IEC 27701 Privacy Information
- ISO 42001 Artificial Intelligence

We also support mining companies with Data Privacy, Penetration Testing, SOC 2 assessments, TISAX and PCI-recognised security evaluations, including PTS, CPoC, SPoC, MPoC and 3DS SDK.

Sustainability Assurance

Support your sustainability journey with our comprehensive portfolio of independent, third-party assessments tailored to the mining sector that help validate responsible environmental and ESG performance and alignment with investor and reporting expectations, including:

- GHG Protocol
- ISO 14064
- Towards Sustainable Mining (TSM) Solutions
- ESG Health Check
- ESG Materiality Assessment
- Sustainability Report Assurance
- Global Reporting Initiative (GRI)
- CSRD
- SBTi Target Setting and Advisory

Ethical Audits

We offer a range of ethical audits, such as SMETA, designed to support mining companies in managing social risk across operations and supply chains and demonstrating commitment to responsible and sustainable mining practices.

Training Solutions

Our global expertise, combined with our unique reach across the mining industry, ensure that you benefit from consistent training and development at every level of your organisation, anywhere in the world.

- **SGS Academy:** Our training covers a wide range of topics, including safety, quality, compliance, sustainability, brand protection and risk management. Courses are delivered in face-to-face, eLearning and Virtual Instructor-Led Training (VILT) environments, ensuring training objectives are achieved regardless of your site location.
- **Odyssey Training:** Practical short courses designed for the Australian workplace, equipping professionals with essential skills in Microsoft Office, professional development and leadership. We offer in-house, live interactive online and on-site corporate training tailored to your needs, helping you build capabilities that drive real results and operational effectiveness.



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