

SGS Australia Industries & Environment

CAPABILITY LIST

SAFER
GREENER
SMARTER

SGS

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Group profile

We are SGS – the world's leading testing, inspection and certification company.

SGS is the world's leading Testing, Inspection and Certification company. We operate a network of over 2,700 laboratories and business facilities across 119 countries, supported by a team of 99,250 dedicated professionals. With over 145 years of service excellence, we combine the precision and accuracy that define Swiss companies to help organizations achieve the highest standards of quality, safety and compliance.

Our brand promise – when you need to be sure – underscores our commitment to trust, integrity and sustainability, enabling businesses to thrive with confidence. We proudly deliver our expert services through the SGS name and trusted specialized brands, including Brightsight, Bluesign, Maine Pointe and Nutrasource.

We provide worldwide, independent services that make a difference in people's lives.

Our core services can be divided into three categories

Inspection: our comprehensive range of world-leading inspection and verification services, such as checking the condition and weight of traded goods at transit, help you to control quantity and quality, and meet all relevant regulatory requirements across different regions and markets

Testing: our global network of testing facilities, staffed by knowledgeable and experienced personnel, enable you to reduce risks, shorten time to market and test the quality, safety and performance of your products against relevant health, safety and regulatory standards

Certification: we enable you to demonstrate that your products, processes, systems or services are compliant with either national or international standards and regulations or customer defined standards, through certification

We are constantly looking beyond customers' and society's expectations in order to deliver market leading services wherever they are needed. As the leader in providing specialised business solutions that improve quality, safety and productivity and reduce risk, we help customers navigate an increasingly regulated world.

Our independent services add significant value to our customers' operations and ensure business sustainability.

As well as delivering services that promote sustainable development, our values also show a commitment to corporate sustainability. For us, sustainability is about managing a long-term profitable business while considering all the positive and negative environmental, social and economic effects we have on society. You can find out more about our sustainability policies and programme in our Corporate Social Responsibility section.

SGS is publicly traded on the SIX Swiss Exchange under the ticker symbol SGSN (ISIN CH0002497458, Reuters SGSN.S, Bloomberg SGSN:SW).



SGS in Australia

SGS operates over 45 offices and laboratories nationally, with the head office in Perth and major facilities in Sydney, Melbourne, and Cairns.

SGS competitive advantages

- Dedicated project specialists with >30 years' experience
- Technical seminars
- Quarterly account reports
- NATA accredited global network of laboratories
- SGS brand and independence
- Unparalleled expertise from laboratories on 5 continents
- 24/7 data access with **SGS ENGAGE**. Easily access new and old reports, invoices, COCs and other documents. Trending and monitoring toolbox options for compliance or historic data

Service agreement

- Single point of contact/key account management
- Customised pre-filled COCs, bottle labelling

Turnaround time

- Standard 5-day turnaround time (TAT) on soil/water samples
- Shorter TAT surcharge options
- Specialised analyses or subcontracted work may vary

Sample receipt

- Confirmation of receipt of samples and COC analytical instruction within 24hrs of receipt of samples by SRA
- Consumable supply
- SGS supplied bottle jars, eskies and sampling containers upon request

Courier/logistics

- Provision of same day standard driver/ courier pickup in designated metro areas without additional cost
- Supply of logistics assistance nationally due SGS national presence in over 60+ sites and offices

Reporting/DATA

- Online 24/7 access via **SGS ENGAGE**
- Timely reporting based on project request
- Standard analytical report, QA/QC and Excel
- Innovative support via e-data solutions such as Guideline Objective (GO) reporting and SPM (Sample Planning Module)
- Customised reporting using ESdat, EQUIS, Esri, PARC

Industries & Environment locations

SGS Australia

au.sales.enviro@sgs.com
1300 781 744

Perth - Headquarters

Adelaide

Brisbane

Cairns

Chinchilla

Mackay

Melbourne

Morwell

Newcastle

Newman

Perth

Shepparton

Sydney

Townsville

Wollongong



Corporate social responsibility

Business principles

The business principles are the cornerstone on which all our activity rests. They are held to be fundamental, overarching beliefs and behaviours that guide our decisions and allow us to embody the SGS brand in everything we do.



INTEGRITY



HEALTH, SAFETY & ENVIRONMENT



QUALITY & PROFESSIONALISM



RESPECT



SUSTAINABILITY



LEADERSHIP

Our approach to sustainability

Sustainability is one of our Business Principles; it is embedded in our culture and the way we do business

— 2014

CARBON NEUTRAL SINCE 2014

▼ 43%

DECREASE IN TOTAL GREENHOUSE GAS EMISSIONS AGAINST A 2014 BASELINE

▲ 95%

ELECTRICITY FROM RENEWABLE SOURCES

▲ CHF 1,243K

INVESTED IN COMMUNITIES AROUND THE WORLD

▼ 68%

TRIR DECREASE SINCE 2014

▼ Zero

ZERO TOLERANCE OF ANY FORM OF DISCRIMINATION

▲ Governance

STRONG SUSTAINABILITY GOVERNANCE STRUCTURE

▲ 100%

OF SPEND ANALYZED FOR SUSTAINABILITY RISKS

▲ Incentive

MANAGEMENT INCENTIVE PLAN LINKED TO SUSTAINABILITY



Sustainability ambitions 2030



Better
Planet

Supporting the transition to a low carbon and climate resilient world through responsible resource use and effective waste management.



Better
Society

Empowering equality, wellbeing and prosperity.



Better
Governance

Enabling long-term value through secure, fair, transparent and responsible business practices.

Reconciliation action plan

Reconciliation Australia has welcomed SGS Australia to the Reconciliation Action Plan (RAP) program and formally endorsed its inaugural Innovate Reconciliation Action Plan.

As a member of the RAP community, SGS Australia joins over 1,000 dedicated corporate, government, and not-for-profit organisations that have formally committed to reconciliation through the RAP program since its inception in 2006.

RAP organisations across Australia are turning good intentions into positive actions, helping to build higher trust, lower prejudice, and increase pride in Aboriginal and Torres Strait Islander cultures.

The RAP program provides a framework for SGS and like-minded organisations to advance reconciliation within their spheres of influence.

This Innovate RAP provides SGS Australia a roadmap to begin its reconciliation journey.

Read more on our
reconciliation
action plan by
visiting our website
www.sgs.com.au



'Working Together With Respect for Culture' by Anna Dowling (Badimia)



Operational quality

SGS, as a provider of services to the environmental industry in Australia, fully appreciates the requirements for NATA endorsed testing and reporting. Consequently, all our environmental testing laboratories seek and maintain NATA accreditation.

Quality control: Is a set of determinations performed within a batch of samples analysis by the specific method in order to determine that the method/process is in control. Such measures will include some or all the following (method dependent).

REAGENT/ANALYSIS BLANK (BLK) & METHOD BLANK (MB)	Sample free reagents carried through the preparation/extraction/digestion procedure and analysed at the beginning of every sample batch analysis. A reagent blank is prepared and analysed with every batch of samples plus with each new batch of solvent prior to use.
SAMPLE MATRIX SPIKE (MS) & MATRIX SPIKE DUPLICATE (MSD)	Sample replicates spiked with identical concentrations of target analyte(s). The spiking occurs during the sample preparation and prior to the extraction/ digestion procedure. They are used to document the precision and bias of a method in each sample matrix. Where there is not enough sample available to prepare a spiked sample, another known soil/sand or water may be used. A duplicate spiked sample is analysed at least every 20 samples.
SURROGATE SPIKE (SS)	Used to determine the extraction efficiency. They are organic compounds which are like the target analyte(s) in chemical composition and behaviour in the analytical process, but which are not normally found in environmental samples. Where possible they are surrogate compounds recommended by the USEPA. At least one but up to four surrogate compounds are added to all samples requiring analysis for organics prior to extraction.
CONTROL MATRIX SPIKE (CMS)	To ensure spike recoveries can be determined for every batch of samples a control matrix is spiked with identical concentrations of target analyte(s) and then analysed. These results allow recoveries to be determined if the matrix spikes are unusable (e.g. Matrix spikes performed on heavily contaminated samples). (This is equivalent to the LCS below). These are analysed at least every 20 samples.
INTERNAL STANDARD (IS)	Added to all samples requiring analysis for organics (where relevant) after the extraction process; the compounds serve to give a standard of retention time and response, which is invariant from run-to-run with the instruments. Where possible they are standard compounds recommended by the USEPA.
LAB DUPLICATES (D)	A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
LAB CONTROL SAMPLES (LCS)	Prepared from a source independent of the calibration standards. At least one control standard is included in each run to confirm calibration validity. Thereafter they are analysed at least everyone in 20 samples plus at the end of each analytical run.
CONTINUOUS CALIBRATION VERIFICATION (CCV) OR CALIBRATION CHECK STANDARD & BLANK	A calibration checks standard or CCV and blank are run after every 20 samples of an instrumental analysis run to assess analytical drift. Calibration Standards are checked old versus new with a criterion of $\pm 20\%$.

Capability list notes

EXAMPLE ADDITIONAL CHARGES

Minimum Fee	Per Invoice
Administration Fee	Per Batch
Disposal Fee	Per Sample

Key account management

SGS will provide a single point of contact as Key Account Manager for all lab queries and a backup contact.

Consumables

SGS will provide standard consumables such as bottles, jars, eskies, bags where stock are regularly maintained.

TurnaroundTime (TAT)

SGS proposes standard 5 working day turnaround for routine works received prior to the cut off time. During busier periods, SGS shall aim to communicate and offer the fastest service possible.

For expedited services please contact the lab to check for availability to meet your needs prior to submission.

ShorterTAT surcharges: (Routine analyses)

TURNAROUND TIMES	TERM	SURCHARGE
Same working day	Same Day	100%
By close of business the next working day	1 day	40%
By close of business 2 working days after receipt	2 days	20%
By close of business 3 working days after receipt	3 days	10%



Logistics

For Primary work submitted to SGS, standard service courier fees within designated metropolitan sites shall not attract a fee. Regional, Priority or urgent courier bookings and those associated with QAQC or triplicate works, including sample pick-ups from competitors shall attract the fees associated with those samples in relation to logistics.

While SGS may facilitate courier services we do so on our client's behalf. As such, SGS accepts no responsibility for any loss or damage in transit, including consequential losses.

By agreeing to SGS facilitating courier services, you agree to and are bound by the courier service providers Terms and Conditions; a copy of these Terms and Conditions will be provided when requested. Please note service level names (such as overnight) are not necessarily indicative of transit times.

It is the client's responsibility to declare if any consignments are classed as Dangerous Goods or if they are under quarantine conditions; any consequences from a failure to declare will be borne by the client.

Reporting value adds

SGS provides detailed standard analytical reports and supporting QAQC Data Quality Reports. In addition, SGS has developed a Guideline Objective (GO) report and NEPM style report to aid interpretation of data. SGS also issues supplementary formats such as ESdat, EQulS, Excel, PDF to meet our client's needs. SGS runs an online portal [SGS Engage](#) for live review of results, please contact our team to gain access.



Suites

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
CL1 7 METALS				
As, Cd, Cr, Cu, Ni, Pb, Zn	AN040 AN320 AN022 AN318	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL2 8 METALS				
As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL3 13 METALS				
As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL1T 7 METALS (TOTAL)				
As, Cd, Cr, Cu, Ni, Pb, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL2T 8 METALS (TOTAL)				
As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL3T 13 METALS (TOTAL)				
As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/ 3050/ 6010B	0.1-3	0.1-5
CL4 VOLATILES				
TRH C6-C10	AN433	USEPA 8260	20	40
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
CL5 TRH/ BTEXN				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
CL6 TRH/ BTEXN/ PB				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
Lead	AN040 AN320 AN022 AN318	USEPA 6010B	1	1
CL7 TRH/ BTEXN/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5

CONTAMINATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
CL8 TRH/ BTEXN/ PAH				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
CL9 TRH/ BTEXN/ PAH/ PB				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
Lead	AN040 AN320 AN022 AN318	USEPA 6010B	1	1
CL10 TRH/ BTEXN/ PAH/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5
CL11 TRH/ BTEXN/ PAH/ PHENOLS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
CL12 TRH/ BTEXN/ PAH/ PHENOLS/ PB				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
Lead	AN040 AN320 AN022 AN318	USEPA 6010B	1	
CL13 TRH/ BTEXN/ PAH/ PHENOLS/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5
CL14 TRH/ BTEXN/ PAH/ PHENOLS/ OC/ PCB				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200

CONTAMINATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
PCB	AN420	USEPA 8270	0.2	1
CL15 TRH/ BTEXN/ PAH/ PHENOLS/ OC/ OP/ PCB/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
PCB	AN420	USEPA 8270	0.2	1
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5
CL16 TRH/ BTEXN/ PAH/ OC/ PCB/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
PCB	AN420	USEPA 8270	0.2	1
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5
CL17 TRH/ BTEXN/ PAH/ OC/ OP/ PCB/ 8 METALS				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
PCB	AN420	USEPA 8270	0.2	1
8 Metals	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6010B	0.1-3	0.1-5
CL18 TRH/ BTEXN/ PAH/ VOC				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
PAH	AN420	USEPA 8270	0.1	0.1

CONTAMINATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
VOC	AN433	USEPA8260	0.1-2	0.5-20
CL19 TRH/ BTEXN/ SVOC				
TRH C6-C40	AN433 AN403	USEPA 8270	20-100	50-200
BTEXN F1	AN433	USEPA 8260	0.2-0.5	1.0-2.0
SVOC	AN420	USEPA 8270	0.5-5	0.5-50
CL20 VOC & SVOC TARGET COMPOUNDS				
VOC	AN433	USEPA8260	0.1-2	0.5-20
SVOC	AN420	USEPA 8270	0.5-5	0.5-50
CL21 MNA				
Nitrate	AN245 AN276 AN258 MA1127	APHA4500 NO3	0.5	0.05 mg/L
Sulfate (SO4)	AN245 AN275 MA1127	APHA 4500 SO42-	5	1 mg/L
Ferrous Iron	AN271 MA1223	APHA 3500-Fe	-	0.05 mg/L
Methane	AN459	ASTM D1945	-	10
ADDITIONAL CHARGE FOR TOTAL METALS IN SUITES				
ADDITIONAL CHARGE FOR FILTRATION OF WATERS IN LAB, FOR DISSOLVED METALS WHEN NOT FIELD FILTERED.				

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
WQ1 BASIC WATER PHYSICALS			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
WQ2 EXTENDED WATER PHYSICALS			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Acidity	AN140	APHA 2310B	5 mg CaCO3/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO3/L
WQ3 BASIC WATER SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Ca, K, Mg, Na	AN040 AN320 AN022 AN318	USEPA 6020	1 µg/L

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ ²⁻	1 mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl ⁻	1 mg/L
WQ4 EXTENDED WATER SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Acidity	AN140	APHA 2310B	5 mg CaCO ₃ /L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Ca, K, Mg, Na	AN040 AN320 AN022 AN318	USEPA6020	1 µg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl ⁻	1 mg/L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ ²⁻	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.1 mg/L
Nitrate/ Nitrite	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ ⁻ / NO ₃ ⁻	0.005 mg/L
Orthophosphate	AN278 AN245	APHA 4500 P	0.005 mg/L
WQ5 POTABILITY SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Acidity	AN140	APHA 2310B	5 mg CaCO ₃ /L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Ca, K, Mg, Na	AN040 AN320 AN022 AN318	USEPA6020	1 µg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl ⁻	1 mg/L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ ²⁻	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.1 mg/L
Nitrate/ Nitrite	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ ⁻ / NO ₃ ⁻	0.005 mg/L

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
8 Metals As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6020	0.1-5 µg/L
WQ6 POTABILITY SUITE INCLUDING MICROBIOLOGY			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Acidity	AN140	APHA 2310B	5 mg CaCO ₃ /L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Ca, K, Mg, Na	AN040 AN320 AN022 AN318	USEPA6020	1 µg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ 2-	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F-	0.1 mg/L
Nitrate/ Nitrite	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ /NO ₃ -	0.005 mg/L
8 Metals As, Cd, Cr, Cu, Ni, Pb, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 6020	0.1-5 µg/L
E. Coli (Escherichia Coli)	AN704	AS 4276.5	1 CFU /100mL
T. Coliforms (Total Coliforms)	AN704	AS 4276.5	1 CFU /100mL
WQ7 SUITABILITY FOR REVERSE OSMOSIS (INCLUDES MEMBRANE FOULING PARAMETERS)			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Ca, K, Mg, Na	AN020 AN320 AN022 AN320	APHA3120B	0.1; 0.5mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ 2-	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F-	0.1 mg/L
Nitrate	AN245 AN276 AN258 MA1127	APHA 4500 NO ₃ -	0.05 mg/L
Turbidity (pre and post filtration)	AN119	APHA 2130 B	#N/A

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
4 Metals (Ba, Fe, Mn, Sr)	AN020 AN320 AN022 AN320	APHA3120B	0.005; 0.05mg/L
Colour (true)	AN285	APHA 2120	1 Hazen
Silica (Reactive)	AN270	APHA 4500SiO2	0.05 mg/L
Solids, total suspended (TSS, 103°C)	AN114	APHA 2540 D	5 mg/L
WQ8 SUITABILITY FOR IRRIGATION (RELATING TO PLANT AND ANIMAL HEALTH)			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO3/L
Ca, K, Mg, Na, Hardness	AN040 AN320 AN022 AN318	USEPA6020	1 µg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	0.05 mg/L
Nitrate/ Nitrite	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO2/ NO3-	0.005 mg/L
Phosphorus (total)	AN293 AN040 AN320	APHA 4500 P	0.02 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F-	0.1 mg/L
19 metals (Al, As, Be, B, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Hg, Mo, Ni, Se, U, V, Zn)	AN020 AN320 AN022 AN318 AN312 AN311	USEPA 6020	0.1-5 µg/L
SAR	AN122	APHA 3500C	0.1 µg/L
Langeliers Index	AN121	Rayment & Lyons	Ratio
Ryznar Index	AN121	In-house	index
F. Coliforms (Faecal Coliforms)	AN704	AS 4276.5	1 CFU /100mL
WQ9 SUITABILITY FOR CONCRETE			
pH	AN101	APHA 4500 H	0.1 pH units
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Sulfate (SO4)	AN245 AN275 MA1127	APHA 4500 SO42-	1 mg/L
Oil & Grease	AN186 MA1130	APHA 5520	5 mg/L
Sodium (Na)	AN040 AN320 AN022 AN318	USEPA 6020	1 µg/L
Sugar content	AN238	In-house	5 µg/L

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
WQ10 CORROSION INVESTIGATION			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Langeliers Index	AN121	Rayment & Lyons	index
Ryznar Index	AN121	In-house	index
Hardness (Ca, Mg)	AN020 AN320 AN022 AN320	APHA3120B	1mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Alkalinity (Carbonate)	AN135	APHA 2320B	5 mg CaCO ₃ /L
WQ11 SEWAGE TREATMENT PLANT ANALYSIS			
pH	AN101	APHA 4500 H	0.1 pH units
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	0.05 mg/L
Nitrate/ Nitrite	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ /NO ₃ -	0.005 mg/L
Ammonia	AN291 AN280 AN261	APHA 4500 NH ₃	0.05 mg/L
Solids, total suspended (TSS, 103°C)	AN114	APHA 2540 D	5 mg/L
Biological Oxygen Demand (BOD ₅)	AN183	APHA 5210	5 mg/L
WQ12 FORMS OF CARBON			
Total Organic Carbon (TOC)	AN190	APHA5310 B	0.2 mg/L
Total Inorganic Carbon (TIC)	AN190	APHA5310 B	0.2 mg/L
Total Carbon	AN190	APHA5310 B	0.2 mg/L
WQ13 ACID SULFATE SOILS WATER SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	10 mg/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Ca, K, Mg, Na, Al, Fe	AN020 AN320 AN022 AN320	APHA3120B	0.05;0.1; 0.5mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl-	1 mg/L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ 2-	1 mg/L
WQ14 BASIC CSG SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm

WATER SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
Ca, K, Mg, Na	AN020 AN320 AN022 AN320	APHA3120B	0.1; 0.5mg/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Sulfate (SO ₄)	AN245 AN274 MA112701	APHA 4500 SO ₄ ²⁻	1 mg/L
Chloride (Cl)	AN245 AN275 MA1127	APHA 4500 Cl ⁻	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.1 mg/L
SAR, TDS, Hardness	AN122 AN113 AN020 AN320 AN022 AN318	Calculation	Various
Dissolved Silica	AN020 AN320	APHA3120B	0.05 mg/L
WQ15 EXTENDED CSG SUITE			
pH	AN101	APHA 4500 H	0.1 pH units
Conductivity (EC)	AN106	APHA 2510B	2 µS/cm
Total metals (Ca, K, Mg, Na, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Hg, Mo, Mn, Ni, Pb, Se, Sr, V, Zn)	AN022 AN318 AN312 AN311	USEPA 6020	0.1-5 µg/L
Dissolved metals (Ca, K, Mg, Na, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Hg, Mo, Mn, Ni, Pb, Se, Sr, V, Zn)	AN020 AN318 AN312 AN311	USEPA 6010	0.1-5 µg/L
Alkalinity	AN135	APHA 2320B	5 mg CaCO ₃ /L
Sulfate (SO ₄)	AN245 AN274 MA112701	APHA 4500 SO ₄ ²⁻	1 mg/L
Chloride (Cl)	AN245 AN275 MA1127	APHA 4500 Cl ⁻	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.1 mg/L
SAR, TDS	AN122 AN113	Calculation	Various
Dissolved Silica	AN040 AN320 AN022 AN318	APHA 4500SiO ₂	0.05
Bromide	AN245	APHA 4500 Br ⁻	0.05 mg/L

Suites including Microbiological components only applicable to those SGS laboratories that conduct these tests in-house.

ANION CATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR
AN1 MAJOR ANIONS				
Alkalinity	AN135	APHA 2320B	25	5 mg CaCO ₃ /L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ ²⁻	5	1 mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl ⁻	5	1 mg/L
AN2 MAJOR ANIONS +F				
Alkalinity	AN135	APHA 2320B	25	5 mg CaCO ₃ /L
Sulfate (SO ₄)	AN245 AN275 MA1127	APHA 4500 SO ₄ ²⁻	5	1 mg/L
Chloride (Cl)	AN245 AN274 MA112701	APHA 4500 Cl ⁻	5	1 mg/L
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.5	0.1 mg/L
AN3 MINOR ANIONS				
Fluoride (F)	AN141 AN245 AN141 MA1127	APHA 4500 F ⁻	0.5	0.1 mg/L
NO _x	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ /3	0.5	0.05 mg/L
Orthophosphate	AN278 AN245	APHA 4500 P	0.05	0.005 mg/L
AN4 OXIDISED NITROGEN				
NO _x	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ /3	0.5	0.05 mg/L
AN5 ORGANIC NITROGEN				
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
Ammonia	AN291 AN280 AN261	APHA 4500 NH ₃	1	0.05 mg/L
AN6 TOTAL NITROGEN				
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
NO _x	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO ₂ /3	0.5	0.05 mg/L
AN7 FORMS OF NITROGEN				
Ammonia	AN291 AN280 AN261	APHA 4500 NH ₃	1	0.05 mg/L

ANION CATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
Nitrate	AN245 AN276 AN258 MA1127	APHA 4500 NO3-	0.5	0.05 mg/L
Nitrite	AN277	APHA 4500 NO2-	0.5	0.05 mg/L
AN8 NUTRIENTS				
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
NOx	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO2/3	0.5	0.05 mg/L
Total Phosphorus	AN293 AN040 AN320	APHA 4500 P	20	0.02 mg/L
AN9 FORMS OF PHOSPHORUS				
Orthophosphate	AN278 AN245	APHA 4500 P	0.05	0.005 mg/L
Total Phosphorus	AN293 AN040 AN320	APHA 4500 P	20	0.02 mg/L
AN10 FORMS OF NITROGEN AND PHOSPHORUS				
Ammonia	AN291 AN280 AN261	APHA 4500 NH3	1	0.05 mg/L
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
Nitrate	AN245 AN276 AN258 MA1127	APHA 4500 NO3-	0.5	0.05 mg/L
Nitrite	AN277	APHA 4500 NO2-	0.5	0.05 mg/L
Orthophosphate	AN278 AN245	APHA 4500 P	0.05	0.005 mg/L
Total Phosphorus	AN293 AN040 AN320	APHA 4500 P	20	0.02 mg/L
AN11 TOTAL N, TOTAL P, TOTAL K				
Total Kjeldahl Nitrogen (TKN)	AN292 AN281	APHA 4500 Norg	20	0.05 mg/L
NOx	AN245 AN276 AN258 MA1127 AN277	APHA 4500 NO2/3	0.5	0.05 mg/L
Total Phosphorus	AN293 AN040 AN320	APHA 4500 P	20	0.02 mg/L
Potassium	AN040 AN022 AN318	USEPA 6020	10	0.1 mg/L

ANION CATION SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR
CA1 MAJOR CATIONS				
Ca, Mg, K, Na	AN040 AN320 AN022 AN318	USEPA 6020/ APHA3120B	1-5 mg/ kg	0.1; 0.5 mg/L
CA2 EXTENDED MAJOR CATIONS				
Ca, Mg, K, Na, Al, Fe	AN040 AN320 AN022 AN318	USEPA 6020/ APHA3120B	1-5 mg/ kg	0.1; 0.5 mg/L
CA3 MAJOR CATIONS + HARDNESS				
Ca, Mg, K, Na, Hardness	AN040 AN320 AN022 AN318	USEPA 6020/ APHA3120B	-	0.1; 0.5 mg/L
CA4 HARDNESS				
Hardness, Ca & Mg	AN040 AN320 AN022 AN318	USEPA 6020/ APHA3120B	-	1 mg/L
CA5 CATION EXCHANGE CAPACITY (CEC) /EXCHANGEABLE SODIUM POTENTIAL (ESP)				
Ca, Mg, K, Na, CEC	AN320 AN318 AN122	Rayment & Lyons	0.1meq/1 00g	-
CA6 CEC + SAR				
SAR	AN122	APHA 3500C	0.01	-
Ca, Mg, K, Na, CEC	AN320 AN318 AN122	Rayment & Lyons	0.1meq/ 100g	-
CA7 CATION EXCHANGE CAPACITY WITH ALUMINIUM				
Ca, Mg, K, Na, CEC	AN320 AN318 AN122	Rayment & Lyons	0.1meq/ 100g	-
Al (Testing proceeds when pH <5.5)	AN122	Rayment & Lyons	0.1meq/ 100g	-

SVOC SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
SV1 PHENOLS/PAH				
PAH	AN420	USEPA 8270	0.1	0.1
Speciated Phenols	AN420	USEPA 8270	0.5-2	0.5
SV2 LOW LEVEL PHENOLS/PAH				
PAH Low Level	AN420	USEPA 8270	0.005- 0.02	0.005- 0.02
Speciated Phenols Low level	AN420	USEPA 8270	0.1-0.5	0.1-0.5
SV3 OC/OP PESTICIDES				
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1

SVOC SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
SV4 OC/OP PESTICIDES LOW LEVEL				
OC Pesticides Low Level	AN420	USEPA 8270	0.01	0.01-0.05
OP Pesticides Low level	AN420	USEPA 8270	0.05-1	0.01-0.5
SV5 OC/PCB				
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
PCB	AN420	USEPA 8270	0.2	1
SV6 OC/PCB LOW LEVEL				
OC Pesticides Low Level	AN420	USEPA 8270	0.01	0.01-0.05
PCB Low Level	AN420	USEPA 8270	0.1	0.1
SV7 OP/PCB				
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
PCB	AN420	USEPA 8270	0.2	1
SV8 OP/PCB LOW LEVEL				
OP Pesticides Low level	AN420	USEPA 8270	0.05-1	0.01-0.5
PCB Low Level	AN420	USEPA 8270	0.1	0.1
SV9 OC/OP/PCB				
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
PCB	AN420	USEPA 8270	0.2	1
SV10 OC/OP/PCB LOW LEVEL				
OC Pesticides Low Level	AN420	USEPA 8270	0.01	0.01-0.05
OP Pesticides Low level	AN420	USEPA 8270	0.05-1	0.01-0.5
PCB Low Level	AN420	USEPA 8270	0.1	0.1
SV11 OC/OP/PCB/PAH				
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
PCB	AN420	USEPA 8270	0.2	1
PAH	AN420	USEPA 8270	0.1	0.1
SV12 OC/OP/PCB/PAH LOW LEVEL				
OC Pesticides Low Level	AN420	USEPA 8270	0.01	0.01-0.05
OP Pesticides Low level	AN420	USEPA 8270	0.05-1	0.01-0.5
PCB Low Level	AN420	USEPA 8270	0.1	0.1
PAH Low Level	AN420	USEPA 8270	0.005-0.02	0.005-0.02

REGULATORY SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
REG 1 NEPM (1999) SCHEDULE B(1), SOIL INVESTIGATION LEVELS (HILS) TABLE 1A(1)			
As, Be, B, Cd, Cr, Cr(VI), Co, Cu, Pb, Mn, Hg, Ni, Se, Zn, Free Cyanide, Spec Phenol, PAH, OC, Phenoxy acid herbs, PCB, TRH (C6-C40)	See individual analytes	As per NEPM	See individual analytes
REG 2 NEPM SOIL CHARACTERISTICS			
Fe, CEC, pH (CaCl ₂), TOC, Clay Content	See individual analytes	As per NEPM	See individual analytes
REG 3 NSW THE "BATCH PROCESS" RECOVERED FINES ORDER 2014			
Hg, Cd, Pb, As, Cr, Cu, Ni, Zn, TOC, pH, EC, PAH, BTEX, TRH, OCP, PCB, SVCH, Glass, Metal, Rigid plastics, Light Flexible Film, Sieve (0.425 mm, 9.5 mm, 26.5 mm)	See individual analytes	As per NSW EPA	See individual analytes
REG 4 NSW THE RECOVERED AGGREGATE ORDER 2014 / RECOVERED RAILWAY BALLAST ORDER 2014			
Hg, Cd, Pb, As, Cr, Cu, Ni, Zn, EC, metal, glass, asphalt, ceramics, slag, plaster, clay lumps, other friable materials, rubber, plastic, bitumen, paper, Cloth, Paint, Wood and other vegetable matter	See individual analytes	As per NSW EPA	See individual analytes
REG 5 NSW PROCESSED FOUNDRY SAND 2014			
Hg, Cd, Pb, As, Be, Cr, Cu, Mo, Ni, Se, Ag, Zn, F, EC, pH	See individual analytes	As per NSW EPA	See individual analytes
REG 6 NSW RECOVERED GLASS SAND ORDER 2014			
Hg, Cd, Pb, As, Cr, Cu, Mo, Ni, Zn, TOC, EC, metals, plaster, clay lumps, other friable materials, rubber, plastic, bitumen, paper, cloth, paint, wood and other vegetable matter	See individual analytes	As per NSW EPA	See individual analytes
REG 7 NSW THE "CONTINUOUS PROCESS" RECOVERED FINES ORDER 2014, CHARACTERISATION			
Hg, Cd, Pb, As, Cr, Cu, Ni, Zn, TOC, pH, EC, PAH, BTEX, TRH, OCP, PCB, SVCH, Glass, Metal, Rigid plastics, Light Flexible Film, Sieve (0.425 mm, 9.5 mm, 26.5 mm)	See individual analytes	As per NSW EPA	See individual analytes
REG 8 NSW THE "CONTINUOUS PROCESS" RECOVERED FINES ORDER 2014, ROUTINE			
Pb, Cr, Cu, Zn, EC, pH, Glass, Metal, Rigid plastics, Light Flexible Film	See individual analytes	As per NSW EPA	See individual analytes
REG 9 NSW EXCAVATED NATURAL MATERIAL ORDER 2014 (ENM), IN SITU			
Hg, Cd, Pb, As, Cr, Cu, Ni, Zn, EC, pH, PAH, BTEX, TRH, Rubber, Plastic, Bitumen, Paper, Cloth, Paint, Wood	See individual analytes	As per NSW EPA	See individual analytes
REG 10 NSW EXCAVATED NATURAL MATERIAL ORDER 2014 (ENM), STOCKPILED COMPOSITE			
Hg, Cd, Pb, As, Cr, Cu, Ni, Zn, EC, pH, Rubber, Plastic, Bitumen, Paper, Cloth, Paint, Wood	See individual analytes	As per NSW EPA	See individual analytes

REGULATORY SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
REG 11 WA UNCONTAMINATED FILL			
Al, Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Hg, Mo, Ni, Se, Ag, Tl, Sn, U, V, Zn, Cr (3+, 6+), F, WA Asbestos, SO4, Cyanide (Free), Cyanide (Total), TRH, BTEX, SVOC 8270 (PAH, Phenols, PCBs, OC, OP) inc Total 8 BaP TEQ, Total 16 PAH, Total PCB, Total DDE, DDD, DDT, Aldrin + Dieldrin Sums, pH, Total Phenolics, ASLP Prep (Metals/Volatiles), LL Metals (Ag, Th, U), Leached Metals by ICPMS (Al, Sb, As, Cd, Co, Cu, Pb, Mn, Hg, Mo, Ni, Se, Zn, Cr), LL Cr (3+, 6+), Total Cyanide, TP, F, TKN, NH3, TN, NOx, Leached BTEX, Speciated Phenols, ULL OC, Total Phenolics	See individual analytes	As per Landfill Waste Classification	See individual analytes
REG 12 WA LANDFILL CLASSIFICATION			
As, Be, Cd, Cr (6+), Pb, Hg, Mo, Ni, Se, Ag, Al, Ba, B, Co, Cu, Mn, V, Zn, Cyanide (total), Cyanide (amenable), F, BTEX, Phenol (Total and speciated), Phenoxy Acid Herb, Styrene	See individual analytes	As per Landfill Waste Classification	See individual analytes
REG 13 WA LANDFILL CLASSIFICATION (INC AROMATIC AND ALIPHATIC HYDROCARBONS)			
As, Be, Cd, Cr (6+), Pb, Hg, Mo, Ni, Se, Ag, Al, Ba, B, Co, Cu, Mn, V, Zn, Cyanide (total), Cyanide (amenable), F, BTEX, Phenol (Total & speciated), PAH, Phenoxy Acid Herb, TRH (aromatic and aliphatic), styrene, OC, PCB	See individual analytes	As per Landfill Waste Classification	See individual analytes
REG 14 WA LANDFILL CLASSIFICATION SECONDARY ANALYSIS			
TRH (aromatic and aliphatic), Leached Metals 1st metal*, Leached Cyanide (total and amenable), Leached F, Leached organics (Btex, Styrene, PAH, Acid Herbicides)	See individual analytes	As per Landfill Waste Classification	See individual analytes
REG 15 IWRG621 – SOIL HAZARD CATEGORISATION & MANAGEMENT			
TRH, PAH, Speciated Phenols, OCP, PCB, VOC, Metals, As, Cd, Cu, Pb, Hg, Mo, Ni, Sn, Se, Ag, Zn), Cr6+, Cyanide (Total), Fluoride	See individual analytes	As per IWRG621	See individual analytes
REG 16 IWRG621 – SOIL HAZARD CATEGORISATION & MANAGEMENT METALS			
As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn	See individual analytes	As per IWRG621	See individual analytes
REG 17 IWRG621 – SOIL HAZARD CATEGORISATION & MANAGEMENT SCREEN			
TRH, PAH, Speciated Phenols, OCP, PCB, BTEX, Metals (As, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Sn, Se, Ag, Zn), Cyanide (Total), Fluoride	See individual analytes	As per IWRG621	See individual analytes
REG 18 VIC EPA 1828.2 – WASTE DISPOSAL CATEGORIES			
Sb, As, Ba Be, B, Cd, Cu, Pb, Hg, Mo, Se, Ag, Zn, Cr6+, TBT, Cl, Cyanide (Amenable & Total), F, I, NO3, NO2, TRH, BTEX, VOC, SVOC, Formaldehyde, EDTA, PAH, Phenols (Total & Speciated)	See individual analytes	As per 1828.2	See individual analytes

REGULATORY SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
REG 19 VIC EPA 1828.2 – WASTE DISPOSAL CATEGORIES UPPER LIMIT			
As, Cd, Cu, Pb, Hg, Mo, Ni, Sn, Se, Ag, Zn, Cr6+, Total Cyanide, F, Phenols (Total & Speciated), MAH, VCH, BTEX, PAH, TRH, PCB, OCP	See individual analytes	As per 1828.2	See individual analytes
* ADDITIONAL METALS			

METAL SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
7 DISSOLVED METALS				
As, Cd, Cr, Cu, Pb, Ni, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
8 DISSOLVED METALS				
As, Cd, Cr, Cu, Hg Pb, Ni, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
11 DISSOLVED METALS				
As, Be, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
12 DISSOLVED METALS				
As, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
13 DISSOLVED METALS				
As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
15 DISSOLVED METALS				
Al, As, Ba, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Mo, Hg, Ni, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
17 DISSOLVED METALS				
Al, As, Ba, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Mo, Hg, Ni, Se, U, Zn	AN320 AN020 AN318 AN312 AN311	USEPA 200.8/3050/6010B	-	0.1-5
7 TOTAL METALS				
As, Cd, Cr, Cu, Pb, Ni, Zn	AN040 AN022 AN312 AN320 AN318 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
8 TOTAL METALS				
As, Cd, Cr, Cu, Hg Pb, Ni, Zn	AN040 AN022 AN312 AN320 AN318 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5

METAL SUITES

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
11 TOTAL METALS				
As, Be, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
12 TOTAL METALS				
As, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
13 TOTAL METALS				
As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
11 TOTAL METALS				
As, Be, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
12 TOTAL METALS				
As, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Hg, Ni, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
13 TOTAL METALS				
As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, V, Zn, Hg	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
15 TOTAL METALS				
Al, As, Ba, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Mo, Hg, Ni, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5
17 TOTAL METALS				
Al, As, Ba, Be, B, Cd, Co, Cr, Cu, Pb, Mn, Mo, Hg, Ni, Se, U, Zn	AN040 AN320 AN022 AN318 AN312 AN311	USEPA 200.8/3050/6010B	0.1-3	0.1-5

SOIL SUITES

PARAMETER	METHOD REFERENCE	LORmg/kg
SS2 MRTS 16B TEST SUITE C		
Bulk density	Clause 5.2	0.1kg/L
Organic Matter	Clause 5.3	%
Wettability	Clause 5.4	mm/min

SOIL SUITES

PARAMETER	METHOD REFERENCE	LORmg/kg
pH (1:5)	Clause 5.5	0.1 pH units
Electrical Conductivity	Clause 5.6	0.01dS/m
Extractable Phosphorus	Clause 5.8	1mg/kg
Permeability	Clause 5.12	cm/hour
Texture	Clause 5.13	Classification
Large Particles	Clause 5.14	%
Water Repelance Rating	Appendix Table 1	Classification
Emmersons Class (Dispersion)	Clause 3.8.1	Classification
Exchangable Calcium	Clause 15B3	0.1meq/100g
Exchangable Magnesium	Clause 15B3	0.1meq/100g
Ca:Mg Ratio	Clause 15B3	ratio
ESP	Clause 15B3	%
Exchangeable Potassium	Clause 15B3	0.1meq/100g
Exchangeable Aluminium %	Clause 15G1	%
ECEC	Clause15J1	0.1meq/100g
Extractable Sulphur	Method 10B	0.5mg/kg
Soluble Chloride	Method 5A	5mg/kg
SS2 MRTS 16B TEST SUITE C		
Organic Matter	Clause 5.3	%
pH (1:5)	Clause 5.5	0.1 pH units
Electrical Conductivity	Clause 5.6	0.01 ds/cm
Water Repelance Rating	Appendix Table 1	Classification
Emmersons Class (Dispersion)	Clause 3.8.1	Classification
Exchangable Calcium	Clause 15B3	0.1meq/100g
Exchangable Magnesium	Clause 15B3	0.1meq/100g
Ca:Mg Ratio	Clause 15B3	ratio
ESP	Clause 15B3	%
Exchangeable Potassium	Clause 15B3	0.1meq/100g
Exchangeable Aluminium %	Clause 15G1	%
ECEC	Clause15J1	0.1meq/100g
SS8 MRTS 16B TEST SUITE E		
Wettability	Clause 5.4	mm/min
pH (1:5)	Clause 5.5	0.1 pH units

SOIL SUITES

PARAMETER	METHOD REFERENCE	LORmg/kg
Electrical Conductivity	Clause 5.6	0.01 ds/cm
Water Repellence Rating	Appendix Table 1	Classification
Texture	Clause 5.13	Classification
Exchangeable Calcium	Clause 15B3	0.1meq/100g
Exchangeable Magnesium	Clause 15B3	0.1meq/100g
Ca:Mg Ratio	Clause 15B3	ratio
ESP	Clause 15B3	%
Exchangeable Potassium	Clause 15B3	0.1meq/100g
Exchangeable Aluminium %	Clause 15G1	%
ECEC	Clause 15J1	0.1meq/100g
Extractable Sulphur	Method 10B	0.5mg/kg
Soluble Chloride	Method 5A	5mg/kg
SS6 COLWELL NUTRIENTS		
Colwell Potassium	Rayment & Lyons	1
Colwell Phosphorus	Rayment & Lyons	1
SS7 AGGRESSIVITY SUITE		
1:2 extract	In house	-
pH	APHA 4500 H	0.1 pH units
Electrical conductivity	APHA 2310 B	2us/cm
Resistivity	calculation	ohm.cm
Chloride	APHA 4500 CIN	5mg/kg
Sulfate	APHA 4500 SO4	5mg/kg

ACID SULFATE SOILS SUITE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
pHF	AN104	23AF	0.1 pH unit
pHFox	AN104	23BF	0.1 pH unit
pHF and pHFox	AN104	23AF/BF	0.1 pH unit
SPOCAS SUITE			
pH(KCl), TAA	AN219	AS4969	5 mol H+/tonne /0.005% S
Sulphur (KCl)	AN219	AS4969	5 mol H+/tonne /0.005% S

ACID SULFATE SOILS SUITE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
TAA, Extractable Sulphur	AN219	AS4969	5 mol H+/tonne /0.005% S
pH(Ox), TPA	AN218	AS4969	5 mol H+/tonne /0.005% S
Peroxide Sulphur	AN218	AS4969	5 mol H+/tonne /0.005% S
TPA & Peroxide Sulphur	AN218	AS4969	5 mol H+/tonne /0.005% S
ANCE if pHox > 6.5	AN220	AS4969	0.01% CaCO ₃
SHCl if pHKCl <4.5 to calculate SNAS	AN220	AS4969	0.005%
CHROMIUM SUITE			
SCR (CRS)	AN217	AS4969	0.005%
pH(KCl), TAA	AN219	AS4969	5 mol H+/tonne
Acid Neutralisation Capacity	AN214	AS4969	0.05% CaCO ₃
Additional SHCl / SKCl if pHKCl <4.5 to calculate SNAS	AN014	AS4969	0.005%
Additional ANCBT if pHKCl >6.5, S >0.03%	AN014	AS4969	0.05%

ACID MINE DRAINAGE SUITE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
NAPP EXTENDED SUITE			
Aged pH 1:2	AN101	AMIRA 2002	0.1 pH unit
Aged EC 1:2	AN101	AMIRA 2002	2 uS/cm 2 uS/cm
Sulfate SHCl	AN014	AMIRA 2002	0.005%
Total Sulphur	AN012 AN320	AMIRA 2002	0.005%
TOS Tot S - SO ₄	AN014	Calculation	0.005%
ANC	AN212	AMIRA 2002	0.05% CaCO ₃
Acid Base Accounting	AN215	AMIRA 2002	-
Acid Buffering Characterisation Curves (ABCC)	AMIRA	AMIRA 2002	-
Acid Neutralisation Capacity	AN212	AMIRA 2002	0.05% CaCO ₃
Exchangeable Cations	AN122	Rayment and Lyons	0.01 mEq/100g
Sodicity & Salinity (calc from ECEC)	AN122	Rayment and Lyons	-

ACID MINE DRAINAGE SUITE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
NAG - Kinetic	AN212	MEND 2009	0.1 pH unit, 2 uS/cm, 0.5 kg H2SO4/tonne
NAG - Single Addition	AN212	IN-HOUSE	0.5 kg H2SO4/tonne
NAG - Single Addition AMIRA	AN212	AMIRA 2002	0.5 kg H2SO4/tonne
NAG Sequential (per stage)	AN212	AMIRA 2002	0.5 kg H2SO4/tonne
NAPP (TS and ANC only)	AN212	AMIRA 2002	0.005%/0.05% CaCO3
Paste EC (1:2)	AN106	MEND 2009	0.1 pH unit
Paste pH (1:2)	AN101	MEND 2009	2uS/cm
Mineralogy - Quantitative by XRD	XRD	Rietveld XRD	-
Metals - Standard Suite	AN040; AN320	USEPA 6010	0.1-3mg/kg
Metals - Total Elemental (31 elements)	AN040; AN320	USEPA 6010	0.1-3mg/kg
Sulphur Speciation	AMIRA	AMIRA 2002	0.005%
Sulphur- Acid Extractable	AN014	AS4969	0.005%
Sulphur Total	AN012 AN320	Leco\Br2/HNO3/ICP	0.005%
Total Sulphur	AN012 AN320	Leco/Eltra	0.005%
Sample Compositing	-	Per discrete sample	-
Sample Preparation	-	Crush & Pulverise, as required	-

LEACHING AND KINETIC TESTS

PARAMETER	METHOD REFERENCE
Cell Setup	Fabrication according to ASTM or client's needs
Size Fractioning	Sieve Assay
pH	As per water leachates

LEACHING AND KINETIC TESTS

PARAMETER	METHOD REFERENCE
Conductivity	As per water leachates
Sulfate	As per water leachates
Acidity	As per water leachates
Alkalinity	As per water leachates
Phosphate (PO4)	As per water leachates
Chloride	As per water leachates
Fluoride	As per water leachates
Liaison and Reporting	Weekly and/or Monthly, as required
Weekly Maintenance	Deluge and Leach Sampling, Filtration (0.45µm)
Checks & Balances	Trending of Data, per report

ACID SULFATE SOILS (PARAMETERS)

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
pHF	AN104	23AF	0.1 pH unit
pHFox	AN104	23BF	0.1 pH unit
pHF and pHFox	AN104	23AF/BF	0.1 pH unit
pH(KCl), TAA	AN219	AS4969	5 mol H+/ tonne/0.005%
Sulphur (KCl)	AN219	AS4969	5 mol H+/ tonne/0.005%
TAA, Extractable Sulphur	AN219	AS4969	5 mol H+/ tonne/0.005%
pH(Ox), TPA	AN218	AS4969	5 mol H+/ tonne/0.005%
Peroxide Sulphur	AN218	AS4969	5 mol H+/ tonne/0.005%
TPA & Peroxide Sulphur	AN218	AS4969	5 mol H+/ tonne/0.005%
ANCE if pHox > 6.5	AN214	AS4969	0.01% CaCO3
SHCl if pHKCl <4.5 to calculate SNAS	AN014	AS4969	0.005%
SCR (CRS)	AN217	AS4969	0.005%
pH(KCl), TAA	AN219	AS4969	5 mol H+/tonne
Acid Volatile Sulphur	-	AS4969	
Acid Neutralisation Capacity	AN214	AS4969	0.05% CaCO3

ACID SULFATE SOILS (PARAMETERS)

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LORmg/kg
Additional SHCl / SKCl if pHKCl <4.5 to calculate SNAS	AN014	AS4969	0.005%
Additional ANCBT if pHKCL >6.5, S >0.03%	AN214	AS4969	0.05%

Parameter pricing

INORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Ammonia	AN291 AN280 AN261	APHA 4500NH3	1	0.05
Ammonia, low level	AN261	APHA 4500NH3	0.1	0.005
Biological Oxygen Demand (BOD5)	AN183	APHA 5210	50	5
Bromate	AN245	APHA 4110	-	0.05
Bromide	AN245	APHA 4110	-	0.05
Carbohydrates as Sugar	CEI-076	In House	25mg/kg	5
Chlorate	AN245	APHA 4110	-	0.1
Chloride	AN245 AN274 MA112701	APHA 4500 Cl-	5	1
Chloride acid soluble AS1012.20	AS1012	AS1012.20	0.01% W/W	-
Chlorine (free)	AN144 MA1567	APHA 4500 Cl-	-	0.1
Chlorine (total)	AN144	APHA 4500 Cl-	-	0.1
Chlorine demand	AN145	In House	-	0.1
Chlorite	AN245	APHA 4110	-	0.05
Chlorophyll (a,b,c / pheophytin)	AN738	APHA 10200	-	0.001 /0.0005
Chemical Oxygen Demand (COD)	AN181 AN272	APHA 5220	-	10
Chemical Oxygen Demand (COD) Low	AN181 AN272	APHA 5220	-	5
Cyanate	-	APHA 4500 CN-L	-	0.5
Cyanide (amenable to chlorination)	AN264	APHA 4500 CN-G	0.5	0.004
Cyanide (free) Neutral distillation	AN296 MA1102	In House / ISO14403:2002	0.5	0.004
Cyanide (free) titration	AN157	APHA 4500 CN-D	10	0.5

INORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Cyanide (total)	AN287 AN296 MA1102	APHA 4500 CN-C / ISO14403:2002	0.5	0.004
Cyanide (weak acid dissociable, WAD)	AN287 AN296 MA1102	APHA 4500 CN-I / ISO14403:2002	0.5	0.004
Cyanide Soil Extraction	-	USEPA 9013 / ISO14403:2002	NA	-
Dissolved Organic Carbon in water (DOC)	AN190	APHA5310 B	-	0.2
Fluoride in Water	AN141 AN245 AN141 MA1127	APHA 4500 F-	0.5	0.1
Fluoride in Solids (by Fusion)	AN142	NEPM 404	50	-
Formaldehyde (colourimetric)	AN226 MA1159 MA1159A	NIOSH 3500	-	0.2
Free CO ₂	AN140 AN135	APHA 4500 CO ₂	-	5
Iodide	AN286 AN245	APHA 4110	0.2	0.02
Nitrate as N	AN245 AN276 AN258 MA1127	APHA 4500 NO ₃ -	0.5	0.05
Nitrate as N (Low level)	AN245	APHA 4500 NO ₃ -	0.05	0.005
Nitrite as N	AN277	APHA 4500 NO ₂ -	0.5	0.05
Nitrite (low level)	AN258	APHA 4500 NO ₂ -	0.05	0.005
Nitrogen (oxidised)	AN277	APHA 4500 NO ₃ -	0.5	0.05
Nitrogen (oxidised, low level)	AN258	APHA 4500 NO ₃ N	0.1	0.005
Oil & Grease	AN185 AN186 MA1130	APHA 5520	100	5
Oil & Grease (Low Level)	AN185	APHA 5520		1
Oil & Grease + Hydrocarbons	AN185 AN186	APHA 5520	100	5
Phenolics total	AN289	APHA 5530	0.1	0.05
Phosphate reactive (FRP)	AN278 AN245	APHA 4500 P	0.05	0.005
Phosphorus (total)	AN279 AN040 AN320	APHA 4500 P	20	0.02
Phosphorus Buffer Index (PBI)#	RL9I2A	In House	1 mL/g	-
Phosphorus Retention Index (PRI NWA)	AN242 AN241	In House	2 mL/g	-
Phosphorus Sorption Index (PSI)#	AN239	Rayment & Lyons	1	-

INORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Phosphorus, Colwell	RH9B1	Rayment & Lyons	1	-
Phosphorus absorption isotherm	AN015	Rayment & Lyons	0.02	-
Phosphorus sorption capacity	AN239	In House	1	-
Silica (Reactive)	AN270	APHA 4500SiO2	-	0.05
Sulfate	AN245 AN275 MA1127	APHA 4500 SO42-	5	1
Sulfate (acid extractable N 4M HCl)	AN014	AS 4969	0.01%	-
Sulfate acid soluble AS1012.20	AS1012	AS1012.20	0.005%W/W	-
Sulfide as S2-	AN149	APHA 4500 S2-	N	0.1
Sulfite	AN150	APHA 4500 SO32-	N	2
Sulphur (total) -bromine/acidic digest AN012	AN012 AN320	AN 012	0.005%	-
Sulphur (total) -LECO	AN202	LECO	0.005%	-
Surfactants, anionic (MBAS)	AN192	APHA 5540	0.5	-
Tannin & lignin	AN196	APHA 5550 B	N	-
Thiocyanate	AN156	APHA 4500 CN-M	N	-
Thiosulfate	AN150	APHA 4110	N	-
Total Carbon	AN203	LECO	0.02%	-
Total Carbon in water (TC)	AN190	APHA5310 B	-	0.2
Total Inorganic Carbon in water (TIC)	AN190	APHA5310 B	-	0.2
Total Kjeldahl Nitrogen (TKN)	AN190	APHA 4500 Norg	-	0.05
Total Organic Carbon	AN203	LECO	0.02%	-
Total Organic Carbon in water (TOC)	AN190	APHA5310 B	-	0.2
Total organic matter / carbon in soil	AN188	AS1289.4.4.1/NEPM 105/Heanes	0.050%	-
Unionised Hydrogen Sulfide as H2S	AN149	APHA 4500 S2-H	-	0.05
Unionised Hydrogen Sulfide as H2S (Low Level)	AN149	APHA 4500 S2-H	-	0.1 ng/L

Colwell P testing is required when conducting PBI and PSI testing.

PHYSICALS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Absorbance/ Transmittance (254/270nm)	AN230 AN231	Christian 1986	-	0.001 abs units
Acidity	AN140	APHA 2310B	25	5 mg CaCO ₃ /L
Alkalinity	AN135	APHA 2320B	25	5 mg CaCO ₃ /L
Bulk Density	AS4419	AS4419	0.1 kg/L	-
Carbonate content soil rapid titration	AN206	Rayment & Lyons	1 % CaCO ₃	-
Colour (true)	AN285	APHA 2120	-	1 Hazen
Conductivity (EC)	AN106	APHA 2510B	5 µS/cm	2 µS/cm
Dissolved Oxygen (DO)	AN176	APHA 4500OG	-	1 mg/L
Dissolved Oxygen (field fixed)	MA1567	APHA 4500OC	-	1 mg/L
Emmerson Class	AN009	AS 1289.3.8.1	Classification	-
Hardness, Ca & Mg	AN020 AN320 AN022 AN318 MA1145	APHA3120B	-	1 mg CaCO ₃ /L
LOI (550)	AN115 ASTM D2974	in-house	1%	-
Moisture (only)	AN002	In House	1.00%	-
pH	AN101	APHA 4500 H	0.1 pH units	0.1 pH units
pH (CaCl ₂)	AN101	Rayment & Lyons	0.1 pH units	-
RedOx potential (Eh or ORP)	AN240	APHA 2580	mV	mV
Resistivity	AN106	APHA 2510	-	ohm.cm
Resistivity Soil	AN106	AS1289.4.4.1	ohm.cm	-
Salinity (from EC)	AN106	Calculation	10	2 mg/L
Sedimentation (75µm Fraction only)	AN005	AS 1289.3.6.0	1%	-
Settled Sludge Volume	AN112	APHA 2710	-	10 mg/L
Sieve Analysis (5 Fractions)	AN005	AS 1289.3.6.1	1%	-
Sieve Sedimentation (Hydrometer)	AN005	AS 1289.3.6.3	1%	-
Sodium Absorption Ratio (SAR)	AN040 AN320 AN022 AN318	APHA 3500C	ratio	ratio
Soil Texture	AS4419	AS 4419	CLASS	-

PHYSICALS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Solids (total)	AN113	APHA 2540 B	-	10 mg/L
Solids, total dissolved (TDS, 180°C)	AN113	APHA 2540 C	-	10 mg/L
Solids, total suspended (TSS, 103°C)	AN114	APHA 2540 D	-	5 mg/L
Solids, total suspended (TSS, 103°C) (Low Level)	AN114	APHA 2540 D	-	1 mg/L
Solids, volatile (VS, 550°C)	AN113	APHA 2540 E	1%	10 mg/L
Solids, volatile suspended (VSS, 550°C)	AN114	APHA 2540 E	-	5 mg/L
Specific gravity (non-NATA)	AN120	APHA 2710 F	-	g/mL
Turbidity	AN119	APHA 2130 B	-	0.5 NTU

ORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Acrylamide	MA1449	MA-1449	-	0.02
Alcohols in Water	MA1418 AN478	MA1418	-	1mg/L
Amines -Aliphatic	MA1517	MA-1517	-	1mg/L
Amines -Aromatic	MA1175	MA-1175	-	1mg/L
Amitrole & Fosamine	MA1569	MA-1569	0.5	1
Anilines	MA8270	8270	0.5	1
BTEXN	AN433	USEPA 8260	0.2-0.5	1.0-2.0
BTEXN -low level	AN433	USEPA 8260	0.02-0.05	0.1-0.5
Carbamates	AN420	USEPA 8270	0.5-1	0.5-1
Carboxylic Acids - Volatile Fatty Acids	MA1425	MA-1425	-	1mg/L
Cerechlors (Batch Fee)	-	-	-	-
Cerechlors (Per Sample)	-	MA_1497	0.5	1
Dicarboxylic Acids	MA1426	MA-1426	-	1mg/L
Dioxins	BELGIUM	HRGC/MS	<0.0014 TEQ	<0.0014 TEQ
Dioxins - screening method	BELGIUM	HRGC/MS	50 ng/kg TEQ	

ORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Dissolved gases (Methane in Water)	MA1105 AN459	MA1105	-	1
EDTA NTA	MA1120 AN417	In House	-	20
Explosives inc NG & PETN	MA-1129	MA-1129	0.1	1
Glyphosate & AMPA	MA-1421	MA-1421	0.5	10
Haloacetic acids	USEPA 552.3	USEPA 552.3	-	1
Haloacetonitriles	MA-1565	USEPA 551	-	1
Herbicides by LCMS	MA1569	MA1569	0.01-0.5	1-10
Herbicides-Chlorinated	MA84	MA-84	0.5	1
Herbicides-Triazine	AN420	USEPA 625	0.5-1	0.5-1
Mercaptans	MA-1434	MA-1434	-	1
Monocyclic Aromatic Hydrocarbons - MAH	AN433	USEPA 8260	0.1	0.5
Nitrosamines	MA74	8270	0.5	1
Nitrosamines - low level	MA74	8270	-	0.01
OC Pesticides	AN420	USEPA 8270	0.1-0.2	0.1
OC Pesticides - low level	AN420	USEPA 8270	0.01	0.01-0.05
OC Pesticides - Ultra low level	AN420	USEPA 8270	0.05	0.002-0.005
OP Pesticides	AN420	USEPA 8270	0.2-1	0.2-1
OP Pesticides - low level	AN420	USEPA 8270	0.05-1	0.01-0.5
OP Pesticides - Ultra low level	AN420	USEPA 8270	0.05-0.1	0.004-0.1
Organo Leads	MA-1121	MA-1121	0.5	1
Organonitrogen Pesticides	MA83	MA-83	0.5	1
Organonitrogen Pesticides (ULL)	MA-83L	MA-83L	0.05	0.001
Organotins	MA1427	ISO/DIS 23161 ISO 17353:2004	-	2 - 5
Organotins - TBT only	MA1427	ISO/DIS 23161 ISO 17353:2004	0.001	2
Oxygenates	MA-1488	MA-1488	0.1-1	0.01-0.2mg/L
PAH	AN420	USEPA 8270	0.1	0.1

ORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
PAH - low level	AN420	USEPA 8270	0.005-0.02	0.005-0.02
PAH - Ultra low level	AN420	USEPA 8270	0.005	-
Paraquat & Diquat	MA-1211	MA-1211	1	1
PCB	AN420	USEPA 8270	0.2	1
PCB - low level	AN420	USEPA 8270	0.1	0.1
PCB - Ultra low level	AN420	USEPA 8270	0.005-0.02	0.004-0.02
Perfluorinated Surfactants PFAS	MA-1523	MA-1523	0.01	0.1-0.01
Perfluorinated Surfactants PFAS (Low Level)	MA-1523	MA-1523	0.0008-0.016	0.00023
Initial PFAS Analysis + TOP Prep + Post TOPA Analysis	MA-1523	MA-1523	0.0008-0.016	0.001-0.02
TOP Prep + Post TOPA Analysis	MA-1523	MA-1523	-	-
PFAS Short Suite	MA-1523	MA-1523	0.01	0.1-0.01
PFAS in Biota (Short Suite)	-	In-House	NA	NA
PFAS in Serum	-	In-House	NA	NA
Phenols - speciated	AN420	USEPA 8270	0.5-2	0.5
Phenols - speciated low level	AN420	USEPA 8270	0.1-0.5	0.1-0.5
Phenols - speciated Ultra low level	AN420	USEPA 8270	0.05-0.2	0.05-0.2
Phenoxy Acid Herbicides	MA84	USEPA 8151	0.2-0.5	0.2-0.5
Phenoxy Acid Herbicides-low level	MA84	USEPA 8151	0.01	0.01
Phthalates	AN420	USEPA 8270	0.5-5	1.0-10.0
SVCH - Semi - Volatile Chlorinated Hydrocarbons	AN420	USEPA 8270	0.5-1	0.1-2
SVOC 8270	AN420	USEPA 8270	0.5-5	0.5-50
SVOC scan for 8270 and Unknowns	AN420	USEPA 8270	Various	Various
Synthetic pyrethroids	AN420	USEPA 8270	0.5-2	0.5-2
THM - Trihalomethanes	AN420	USEPA 8260	0.1	0.5
Tolytriazoles (NN)	AN441	USEPA 8270	20-50	5.0-20

ORGANICS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
Toxaphene (NN)	AN420	EPA8081A	1	1
TRH Silica Gel -Total Petroleum Hydrocarbons C10-C40	AN433 AN403	USEPA 8270	20-100	50-200
TRH Silica Gel -Total Petroleum Hydrocarbons C10-C40 LL	AN403	USEPA 8270	20-100	20-200
TRH -Total Recoverable Hydrocarbons C10-C40	AN403	USEPA 8270	20-100	50-200
TRH -Total Recoverable Hydrocarbons C6-C40	AN433 AN403	USEPA 8260/8270	20-100	50-200
TRH -Total Recoverable Hydrocarbons C6-C40 low level	AN433 AN403	USEPA 8260/8270	2.0-10	20-100
VCH -Volatile Chlorinated Hydrocarbons	AN433	USEPA 8260	0.1-0.5	0.3-5
VOC 8260	AN433	USEPA 8260	0.1-2	0.5-20
VOC scan for 8260 and unknowns	AN433	USEPA 8260	Various	Various
VOC's-Brominated	AN433	USEPA8260	0.5	0.1
VPH -Volatile Petroleum Hydrocarbons -C6-C10	AN433	USEPA 8260	20	40

METALS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
1st metal - Total Digest	AN040 AN320 AN022 AN318	USEPA 200.8/3050/6010B	0.1-3	0.1-5
1st Metal - Weak Acid Digest	-	USEPA 200.8/3050/6010B	0.1-3	-
1st metal - Dissolved/Filtered	AN020 AN318	APHA3030B/ USEPA6020	-	0.1-5
1st metal Saline Water - Dissolved /Filtered	AN318	APHA3030B/ USEPA6020	-	0.1-5

METALS

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR mg/kg	LOR µg/L
1st Metal Saline Water - Total	AN318	USEPA 200.8/3050/6010B	-	0.1-5
Cations in Water	AN040 AN320	APHA3030B/3120B	-	100-500
DTPA Metals	AN025	Rayment & Lyons / AN025	0.05-0.5	-
Ferrous Iron	AN271 MA1223	APHA 3500-Fe	-	0.05 mg/L
Hexavalent Chromium	AN283 MA1410	APHA 3500 Cr B	1	0.05 mg/L
Hexavalent Chromium (alkaline digest)	AN201 MA1410	USEPA 3060A	1	-
Hexavalent Chromium (low level)	AN283 MA1410	APHA 3500 Cr B	-	0.002 mg/L
KCl-40 extractable	-	Rayment and Lyons	1	-
Low level Silver	MA1400	In-house	-	0.05
Mercury	AN312 AN311 MA1400	APHA 3112 EPA6020	0.05	0.0001 mg/L
Mercury (low level)	AN312 AN311	APHA 3112	0.01	0.00005
Metals - Cost per element	AN040 AN320 AN022 AN318	USEPA 200.8/3050/6010B/6020	0.1-3	0.1-5
NAG extract Metals	-	APHA3120B	0.001 -0.05	0.001 -0.5 mg/L
Saline Metals - Cost Per element	AN318	USEPA6020	-	0.1-1
Speciation-Arsenic (III & V)#	MA1400	MA_1400 spc	5ug/kg	-
Speciation-Mercury (Hg II, MethylHg, EthylHg & PhenylHg)#	MA1400	MA-1400-SPC-Hg	0.01	0.02
Speciation-Selenium (III & IV)#	MA1400	MA-1400-SPC-Se	0.05	1
# SPECIATION BATCH FEE				

PREPARATION

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE
ASLP/TCLP -SVOC/Metals	AN006	AS 4439.3
ASLP/TCLP -VOC/Cyanides	AN006	AS 4439.2
Compositing per discrete sample	-	In House
Filtration	-	-

PREPARATION

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE
Paint film dried digest	-	In House
Rinsate water supply per L	-	-
PFAS Free Rinsate water supply per L	-	-
Sample Hold/Storage (per part month)	-	-
Sieve fractionation (each)	-	-
Soil/Water extract 1:5	-	Rayment & Lyons
Solids crush/pulverise	-	In House
Solids pulverise only	-	In House
Soil preparation	-	In House

HYGIENE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
Asbestos ID soil	AN602	PLM/Disp. Stain.	D / ND
Asbestos ID building materials	AN602	PLM/Disp. Stain.	D / ND
Asbestos fibre count (per filter)	AN601	Phase Contrast Micr.	0.01 fibres /mL
Asbestos ID Water/Aqueous	AN602	In House	D / ND
Asbestos ID and quantitation in soil (500ml)	AN605	AS4964- P M/DISP Stain	0.001%
Asbestos bulk sieve (10L)	AN605	WA-DER	-
Weight of fragments	AN002	In House	0.01 g
Diesel Particulate Matter-Total, Elemental and Organic Carbon	AN204	VDI 2465/2	0.5 µg/filter
Dust Deposition (complete)	AN503	AS 3580.10.1:2003	0.1g/m ² /month
Dust, Ash Content	AN503	AS 3580.10.1:2003	0.1g/m ² /month
Dust, Combustible Matter	AN503	AS 3580.10.1:2003	0.1g/m ² /month
Dust, Insoluble Solids	AN503	AS 3580.10.1:2003	0.1g/m ² /month
Dust, Soluble Matter	AN503	AS 3580.10.1:2003	0.1g/m ² /month
Dust, Total Solids	AN503	AS 3580.10.1:2003	0.1g/m ² /month
First metal in Depositional Dust	AN320	USEPA 6020	2ug/m ² /day
Foreign Materials Content in Soils (All 3 Types)	AN030	RTA T276	%W/W
Foreign Materials Content in Soils (Single Type)	AN030	RTA T276	%W/W
Subsequent metal in Depositional Dust	AN320	USEPA 6020	2ug /m ² /day

HYGIENE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
Formaldehyde in Badges	AN226	NIOSH 3500	0.2mg
Hi-Vol (PM10, PM2.5, TSP) filter pre weight and label (filter supply additional)	-	AS 3580.9.3:2003	0.05mg
Hi-Vol (PM10, PM2.5, TSP) filter post weight and report	-	AS 3580.9.3:2003	0.05mg
Lead in Paint	AN065 AN320	ASNZS 1580	0.001 %W/W
Metals in Filters/Wipes 1st element	AN070 AN320	NIOSH 7301 / 7303	2ug/filter
Metals in Filters/Wipes (per element)	AN070 AN320	NIOSH 7301 / 7303	2ug/filter
Metals in Tubes (prep)	-	-	-
Metals in Tubes (per element)	-	USEPA 6020	0.05mg
Inhalable Dust	AS 3640	AS 3640	0.01 mg/m3
Respirable Dust	AN505	AS 2985	0.01 mg/m3
Respirable Silica (Crystalline Silica)	AN505	NIOSH 7603	5 µg/filter
Welding fumes prep	AN320	USEPA IO-3.1	-
Welding fumes per metal	AN320	USEPA 6020	2ug/filter
Visible Contaminants in Solid Waste samples	AS4454I	AS4454I	%W/W
Isocyanates - Supply of ASSET EZ4-NCO Dry Sampler	-	MA1456	5-20ng /Tube
Isocyanates - Analysis of ASSET EZ4-NCO Dry Sampler	-	MA1456	5-20ng /Tube
Aliphatic Amines - Solutions	MA-1517	MA-1517	1mg/L
Aliphatic Amines - Sorbent Tube	MA-1517	MA-1517	5mg/L
Aromatic Amines - Solutions	MA-1175	MA-1175	1mg/L
Aromatic Amines - Sorbent Tubes	MA-1175	MA-1175	5mg/L
Alcohols - Solutions	MA-1418	MA-1418	1mg/L
Alcohols - Sorbent Tubes	MA-1418	MA-1418	5mg/L
Volatile Organic Compounds	MA-5	MA-5	0.1µg /Total
Volatile Organic Compounds - TRH	MA-5	MA-5	10µg /Total
Aldehydes and Ketones - Sorbent Tubes	MA-1159	MA-1159	0.1-0.5µg /Total
Carboxylic Acids	MA-1125	MA-1125	1mg/L
PAH's	-	USEPA 8270	1µg/Total

HYGIENE

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
PAH in Filter	-	NIOSH 5506	0.05-0.1ug / filter
PAH normal level- Sorbent Tube	-	NIOSH 5506	0.05-0.1ug / tube
Benzene in tubes	-	NIOSH1501	0.1µg /Total
Mercury Vapour on passive sampler	-	-	-
Mould in Air	AN728	ASTM D7391 - 20	10 FS
Mould on Tape Samples	AN728	ASTM D7658 – 17	10 FS

MICROBIOLOGY

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
Coliphages, Male Specific (FRNA) (biosolid/soil)	AN729 AN728	EPA Method 1602:	1 PFU /gram
Coliphages, Male Specific (FRNA)	AN730 AN731	APHA 9224 E	1 PFU /mL
Coliphages, Somatic (biosolid/soil)	AN729 AN728	EPA Method 1602:	1 PFU /gram
Coliphages, Somatic	AN730 AN731	APHA 9224 E	1 PFU /mL
E. Coli (Escherichia Coli) (biosolid/soil)	AN735	AS 4276.21/23	10 MPN /gram
E. Coli (Escherichia Coli)	AN704	AS 4276.5	1 CFU /100mL
Enterococci	AN750	ASTM D6503	1 CFU /100mL
Enterococci (biosolid/soil)	AN753	AS 4276.23 ASTM D6503	10 CFU/gram
F. Coliforms (Faecal Coliforms)	AN735	AS 4276.5	1 CFU /100mL
F. Coliforms (Faecal Coliforms) (biosolid/soil)	AN704	AS/NZS 4276.21	10 CFU/gram
F. Strep (Faecal Streptococci)	AN700 AN735	Subcon	1 CFU/100mL
Iron Reducing Bacteria	-	Subcon	Presence/ Absence
Legionella & HPC-37 (speciation additional)	AN736	see individual	see individual
Legionella (enumeration)	AN736	AS 3896	10 Legionella spp/mL
Legionella (includes serotyping)	AN736	AS 3896	10 Legionella spp/mL
Pseudomonas Aeruginosa	AN706	AS/NZS 4276.13	1 CFU/100mL

MICROBIOLOGY

PARAMETER	IN-HOUSE METHOD	METHOD REFERENCE	LOR
T. Coliforms (Total Coliforms)	AN704	AS 4276.5	1 CFU /100mL
T. Coliforms (Total Coliforms) (biosolid/soil)	AN700 AN735	AS 4276.5/23	10 CFU/gram
Total Plate Count (HPC-22 or 35 or 37°C) -Pour Plate (biosolid/soil)	AN702	AS 4276.3/23	10 CFU/Gram
Total Plate Count (HPC-22 or 35 or 37°C) -Pour Plate	AN701	AS 4276.3	1 CFU/mL
Turbid and/or Waste Water Levy	-	-	-
Listeria	-	Subcon	1 CFU /100mL
Salmonella	-	Subcon	1 CFU/100mL
Staphylococcus Aureus (coagulase positive staph)	-	AS/NZS 4276.20	1 CFU/100mL
Sulfate Reducing Bacteria (pres/abs)	-	AS 4276.17	10CFU/100ml
Sulfate Reducing Bacteria (Clostridium Perfringens, enum)	-	AS 4276.17	10CFU/100ml
Iron Bacteria	-	QP25-6	1CFU/100ml
Naegleria Fowleri (East Coast)	-	Subcon	10cfu/ml
Naegleria Fowleri (West Coast)	-	Subcon	10cfu/ml
Mould in Air	AN728	ASTM D7391 - 20	10 FS
Mould on Tape Samples	AN728	ASTM D7658 – 17	10 FS

Advanced analysis

NAGD

PARAMETER	LOR
Moisture	0.1%
pHF & pHFox	0.1 pH Units
SPOCAS	Various
TOC	0.1%
Particle Size (Sieve only)	-
Particle Size (Sieve & Hydrometer)	-
TRH	70 mg/kg
BTEXN	200 µg/kg
Phenols - Total	0.1 mg/kg

NAGD

PARAMETER

LOR

Metals 16 (Cu, Pb, Zn, Cr, Ni, Cd, Hg, As, Ag, Mn, Al, Co, Fe, V, Se, Sb)	As per NAGD
Dioxins	0.014 µg/kg
VCH	0.05-5 mg/kg
ORGANICS PACKAGE: PYRETHROIDS / CHLOROBENZENES / CARBAMATES	
Pyrethroids	0.5-2 mg/kg
Chlorobenzenes	50 µg/kg
Carbamates	10-100 µg/kg
ORGANICS PACKAGE: OC/OP/PCB/PAH	
OC Pesticides	1 µg/kg
PCB	5 µg/kg
PAH	5 µg/kg
OP Pesticides	10–100 µg/kg
Organotins	1 µgSn/kg
Total Cyanide	0.25 mg/kg
Ammonia	0.5 mg/kg
Nutrients (Total P, Total N, Nitrite, Nitrate)	0.1-5 mg/kg
Metals 1M HCl extractable - first	As per NAGD
Metals 1M HCl extractable - additional	-
Elutriate preparation - metals	-
Elutriate preparation - organics	-
Porewater extraction	-

ALGAE

PARAMETER

SITES

METHOD REFERENCE

LOR

Total Algal Count – no ID	P	In-house	-
Total Cyanobacteria ID & Count	P	In-house	-
Total Cyanobacteria ID & Count with Biovolume	P	In-house	-
Total Algal ID & Count	P	In-house	-
Total Algal ID & Count with Biovolume	-	In-house	-
Microscopic ID	P	In-house	-
Determination of Biovolume (for non-cyanobacteria species)	P*	In-house	-
WASQAP Algal ID and Enumeration	P	In-house	-

SOIL VAPOUR

PARAMETER	METHOD REFERENCE	LOR
Passive Soil Vapour		
WMS-LU or WMS-R (includes supply and analysis)	MA-5	1-10µg/m3^
Supply of WMS installation kit	-	-
Active Soil Vapour		
TO-13A PAH	USEPA TO-13	
TO-15 Full Suite	USEPA TO-15	1-10µg/m3
TO-15 Chlorinated Suite	USEPA TO-15	1-10µg/m3
TO-15 NEPM (BTEXN, TRH & IPA)	USEPA TO-15	1-10µg/m3
TO-15 TRH	USEPA TO-15	0.1mg/m3
TO-15 TPHCWG (Aromatic/Aliphatic)	USEPA TO-15	0.1mg/m3
IPA Shroud	MA-5	1µg/Total
Supply 100% Certified Canister and Flow Controller (includes SGS SV Kit)	USEPA TO-15	-
TO-17 Full Suite single tube only	USEPA TO-17	5ng/Total
TO-17 Full Suite with distributed volume pair	USEPA TO-17	5ng/Total
TO-17 Chlorinated Suite	USEPA TO-17	5ng/Total
TO-17 NEPM (BTEXN, TRH & IPA)	USEPA TO-17	5ng-100ng/Total
TO-17 TRH	USEPA TO-17	100ng/Total
TO-17 TPHCWG (Aromatic/Aliphatic)	USEPA TO-17	100ng/Total
Supply 100% Certified Thermal Desorption Tube per Pair		
Gas Composition	MA-1105	0.01mol%

AMBIENT AIR

PARAMETER	METHOD REFERENCE	LOR
TO-15 Full Suite	USEPA TO-15	1-10µg/m3
TO-15 Chlorinated Suite	USEPA TO-15	1-10µg/m3
TO-15 TRH	USEPA TO-15	0.1mg/m3
TO-15 TPHCWG (Aromatic/Aliphatic)	USEPA TO-15	0.1mg/m3
VOCs in Canister - total C6-C9	US EPA TO15/PHA	100ppb
Supply 100% Certified Canister and Flow Controller	USEPA TO-15	-
VOCs in Bags - total C6-C9	US EPA TO15/PHA	100ppb
PAH	USEPA TO13A	1 µg/Total
TO-17 Full Suite	USEPA TO-17	5ng/Total

AMBIENT AIR

PARAMETER	METHOD REFERENCE	LOR
TO-17 Chlorinated Suite	USEPA TO-17	5ng/Total
TO-17 TRH	USEPA TO-17	100ng/Total
TO-17 TPHCWG (Aromatic/Aliphatic)	USEPA TO-17	100ng/Total
Aldehydes and Ketones - Solutions	USEPA TO5	0.05mg/L
Aldehydes and Ketones - Sorbent Tubes	USEPA TO6	0.1-0.5µg/ Total
TO-13A PAH	USEPA TO-13A	1 µg/Total
Volatile Organic Compounds - Solvent Desorption - as total	NIOSH 1500	10-50ug/tube
Volatile Organic Compounds - Solvent Desorption	NIOSH 1500 / MA-5	0.1µg/Total
Volatile Organic Compounds - Thermal Desorption	USEPA TO-17	5ng/Total
Aldehydes	MA-1159	0.1-0.5µg/ Total
Ammonia	MA-1179	0.1µg/Total
NOx & SOx	MA-1127	1-5µg/Total
HCl	MA-1127	5µg/Total
HF	MA-1127	5µg/Total
H2S	MA-1127	1µg/Total
Supply of Radiello code RAD 121 backing plate	RAD 121	NA
Radiello code RAD 120 White diffusive body	RAD 120	NA
Radiello code RAD 1201 Blue diffusive body	RAD 1201	NA
Radiello RAD 130 VOC sorbent cartridge	RAD 130	NA
Radiello RAD 145 VOC thermal desorptioncartridge	RAD 145	NA
Radiello RAD 165 Aldehydes sorbent cartridge	RAD 165	NA
Radiello RAD 166 HF, NO2, SO2 cartridge	RAD 166	NA

AIR EMISSIONS

PARAMETER	METHOD REFERENCE	LOR
Hexavalent Chromium - Emissions	MA-1400-SPC-Cr	0.001mg/L
Aliphatic Amines - Solutions	MA-1517	1mg/L
Aliphatic Amines - Sorbent Tube	MA-1517	5mg/L
Aromatic Amines - Solutions	MA-1175	1mg/L

AIR EMISSIONS

PARAMETER	METHOD REFERENCE	LOR
Aromatic Amines - Sorbent Tubes	MA-1175	5mg/L
Alcohols - Solutions	MA-1418	1mg/L
Alcohols - Sorbent Tubes	MA-1418	5mg/L
Volatile Organic Compounds	MA-5	0.1µg/Total
Volatile Organic Compounds - TRH	MA-5	10µg/Total
Aldehydes and Ketones - Solutions	MA-1159	0.05mg/L
Aldehydes and Ketones - Sorbent Tubes	MA-1159	0.1-0.5µg/ Total
Carboxylic Acids	MA-1125	1mg/L
PAH's	USEPA 8270	1µg/Total
PAH in Filter	NIOSH 5506	0.05-0.1ug/ filter
PAH normal level- Sorbent Tube	NIOSH 5506	0.05-0.1ug/ tube
Halides & Halogens	USEPA Method 26	1mg/L
Reduced Sulphur Compounds	MA-1113	20ppmV
Gas Composition	MA-1105	0.01mol%
Full suite- Sample run - Containers 1 to 5C	USEPA Method 29 Mod	-
Container 1- Filter. Determine particulate matter & digest with HF	USEPA Method 29 Mod	-
Container 2- Acetone probe wash. Evaporate to dryness – determine particulate matter	USEPA Method 29 Mod	-
Container 3- Acid probe wash. Digest to near dryness. Analyse for Hg	USEPA Method 29 Mod	-
Container 4- 5% HNO3/10% H2O2 impinger. Digest to near dryness for metals. Digest and analyse for Hg	USEPA Method 29 Mod	-
Container 5A- 0.1N HNO3 impinger. Digest and analyse for Hg	USEPA Method 29 Mod	-
Container 5B- KMnO4 impinger. Filter to separate KMnO4, digest and analyse filtrate for Hg	USEPA Method 29 Mod	-
Container 5C- 8N HCL impinger. Combine filter from 5B and 5C, digest and analyse for Hg	USEPA Method 29 Mod	-
Full suite- Blank run Containers 7 to 12	USEPA Method 29 Mod	-
Container 12- Filter. Determine particulate matter & digest with HF	USEPA Method 29 Mod	-
Container 7- Acetone probe wash. Evaporate to dryness – determine particulate matter	USEPA Method 29 Mod	-
Container 9- 5% HNO3/10% H2O2 impinger. Digest to near dryness for metals. Digest and analyse for Hg	USEPA Method 29 Mod	-

AIR EMISSIONS

PARAMETER	METHOD REFERENCE	LOR
Container 8A- 0.1N HNO3 impinger. Digest and analyse for Hg	USEPA Method 29 Mod	-
Container 10- KMnO4 impinger. Filter to separate KMnO4, digest and analyse filtrate for Hg	USEPA Method 29 Mod	-
Container 8B/11- 8N HCL impinger. Combine filter from 5B and 5C, digest and analyse for Hg	USEPA Method 29 Mod	-

HYGIENE AIR ANALYSIS

PARAMETER	MATRIX	METHOD REFERENCE	LOR
Acrolein	tube	NIOSH 2501	0.4ug/tube
Al/Al2O3 in Filter	filter	NIOSH 7013	5ug/filter
Aldehydes and Ketones - Sorbent Tubes	tube	MA-1159	0.1-0.5µg/ Total
Aniline	tube	NIOSH 2002	1ug/tube
BTEXNs and total VOCs (as package)	radiello	in-house	0.4ug/tube
Cyclohexane low	tube	in-house	0.1
Determination of Biovolume (for non-cyanobacteria species)	P*	In-house	-
WASQAP Algal ID and Enumeration	P	In-house	-
Cyclohexane normal	tube	NIOSH 1501	0.4
Cyclohexylamine	tube	NIOSH 2010	1ug/tube
DMS	tube	NIOSH 2524	1ug/tube
EO	tube	in-house	0.4ug/tube
Epichlorohydrin	tube	NIOSH 1010	0.4 ug per tube
Ethoxyethanol	tube	NIOSH 1403	0.4ug/tube
Ethyl Mercaptan	filter	NIOSH 2532	1ug/tube
Ethylene Oxide in Badges	Air	US EPA TO15	50-100ppbV
Ethylenediamine	tube	NIOSH 2540	1ug/sample
Formaldehyde - RAD 165	tube	in-house	0.1mg/L,
Formaldehyde - Sil Gel Coated	tube	NIOSH 2016	0.1mg/L,

HYGIENE AIR ANALYSIS

PARAMETER	MATRIX	METHOD REFERENCE	LOR
H2S	tube	NIOSH 6013	vary
Iodine	tube	NIOSH 6005	10ug/tube
Isocyanates - Analysis of ASSET EZ4-NCO Dry Sampler	Dry Sampler	MA-1456	0.005-0.5µg/Total
Isocyanates - Supply of ASSET EZ4-NCO Dry Sampler	-	-	-
MEG,DEG,TEG,TEEG in tubes	Air	in-house	vary
Methane, Ethane, Propane, Butane, Pentane,ethylene *	Air	ASTM	10-100ppbv
Methanol, and Ethanol in Badges*	Air	NIOSH	10-100ppbv
Methylcyclohexane	tube	NIOSH 1501	0.4 ug per tube
Methylcyclohexene	tube	NIOSH 1501	0.4 ug per tube
n-decane	tube	NIOSH 1501	0.4 ug per tube
n-dodecane	tube	NIOSH 1501	0.4 ug per tube
n-heptane	tube	NIOSH 1501	0.4 ug per tube
n-hexane	tube	NIOSH 1501	0.4 ug per tube
Nicotine	tube	Niosh 2544	0.05µg/Total*
n-nonane	tube	NIOSH 1501	0.4 ug per tube
n-octane	tube	NIOSH 1501	0.4ug/tube
Non Target VOCs - Library Search (up to 15 major components)	tube	in-house	n/a
Non-Polar SVOC - Library Search (up to 15 major components)	tube	in-house	n/a
n-pentane	tube	NIOSH 1501	0.4ug/tube
n-undecane	tube	NIOSH 1502	0.4ug/tube
Organo Leads	filter	MA-1121	0.1µg/Total*
Pyridines	tube	NIOSH 1613	1-5ug/tube
Rubber Fume	filter	MDHS 47/2	0.01 mg per sample
TEG	tube	NIOSH 5523	0.05mg/ sample
Vinyl Cyclohexene	tube	OSHA PV2083	0.4ug/tube

HYGIENE AIR ANALYSIS

PARAMETER	MATRIX	METHOD REFERENCE	LOR
Welding Fume Metals	filter	MA-1400	0.005-0.1µg/Total
White spirit	tube	NIOSH 1501	100ug/tube

SPECIALIST ANALYSIS & INVESTIGATIONS

PARAMETER	MATRIX	METHOD REFERENCE	LOR
Sulphur Compounds in Gasoline	Gasoline	ASTM D5623	0.1 - 10ppm
Sulphur Compounds in Natural Gas	Natural Gas	ASTM D5504	50ppb - 500ppb
Sulphur Compounds in CO2 Gas	CO2 Gas	in-house	10 - 50ppm v/v
Sulphur Compounds in Light Petroleum Liquids - speciates	LPL	ASTM D5623-94	1 to 500 mg/kg S
Sulphur Compounds in Light Petroleum Liquids - total Sulphur	LPL	ASTM D5623-94	10 to 1000 mg/kg S
Determination of trace thiophene in Refined Benzene	Benzene	ASTM d 7011-04	0.1 - 10ppm
Determination of hydrogen sulfide in fuel oils	Fuel Oils	IP 399/10	0.5 - 50 mg/kg
Volatile Fatty acid in water by GC - High level	water	in-house	5mg/L
Volatile Fatty acid in water by HPLC - Low level	water	in-house	0.5mg/L
Ethanol in water by GC	water	in-house	10mg/L
Methane or hydrocarbon gases in water	water	in-house	

AGRONOMIC SOIL PACKAGES

PARAMETER

BASIC NITROGEN SUITE

Total Nitrogen

Ammonia-N (KCl)

Nitrate-N (KCl)

AGRONOMIC SOIL PACKAGES

PARAMETER

BASIC SUBSOIL SUITE
Ammonia-N (KCl)
Nitrate-N (KCl)
Exchangeable Cations (Al, Na, K, Ca, Mg)
Sulphur (KCl)
pH (CaCl ₂)
pH (H ₂ O)
Electrical conductivity
Chloride (H ₂ O)
COMPLETE SUBSOIL SUITE
Ammonia-N (KCl)
Nitrate-N (KCl)
Exchangeable Cations (Al, Na, K, Ca, Mg)
Sulphur (KCl)
pH (CaCl ₂)
pH (H ₂ O)
Electrical conductivity
Chloride (H ₂ O)
Boron (CaCl ₂)
Dispersion index
Texture & Colour
EC _{se}
BASIC AGRONOMIC SUITE
Basic Agronomic Suite
Nitrate-N (KCl)
Phosphorus (Colwell)
Exchangeable Cations (Al, Na, K, Ca, Mg)
Sulphur (KCl)
Organic Carbon/Matter (Heanes)
pH (CaCl ₂)
pH (H ₂ O)

AGRONOMIC SOIL PACKAGES

PARAMETER

Electrical conductivity
Chloride (H2O)
DTPA extract (Cu, Fe, Mn, Zn)
Boron (CaCl2)
COMPLETE AGRONOMIC SUITE
Total Nitrogen
Ammonia-N (KCl)
Nitrate-N (KCl)
Phosphorus (Colwell)
Exchangeable Cations (Al, Na, K, Ca, Mg)
Sulphur (KCl)
Organic Carbon/Matter (Heanes)
pH (CaCl2)
pH (H2O)
Electrical conductivity
Chloride (H2O)
DTPA extract (Cu, Fe, Mn, Zn)
Boron (CaCl2)
Phosphorus Buffer Index (PBI)
Dispersion index
Texture & Colour
ECse

SUGAR SOIL PACKAGES

PARAMETER

METHOD REFERENCE

SUGAR SUITE 1	
Phosphorus (BSES)	R&L 9G2
Phosphorus (Colwell)	R&L 9B2
Exchangeable Cations (Al, Na, K, Ca, Mg)	R&L 15D3, 15G1
Silicon (BSES)	R&L 13D2
Silicon - Plant Available (CaCl2)	ASA 1982
Organic Carbon/Matter (Heanes)	R&L 6B1
Phosphorus Buffer Index (PBI)	R&L 9I2a
Potassium (Nitric)	R&L 18C1

SUGAR SOIL PACKAGES

PARAMETER

METHOD REFERENCE

pH (CaCl ₂)	R&L 4A1
pH (H ₂ O)	R&L 4B1
Texture & Colour	Northcote (1979), Munsell
Sulphur (MCP)	R&L 10B3
DTPA Extract (Cu, Fe, Mn, Zn)	R&L 12A1
Zinc (HCl)	R&L 12D1
SUGAR SUITE 2	
Phosphorus (BSES)	R&L 9G2
Phosphorus (Colwell)	R&L 9B2
Exchangeable Cations (Al, Na, K, Ca, Mg)	R&L 15D3, 15G1
Silicon (BSES)	R&L 13D2
Silicon - Plant Available (CaCl ₂)	ASA 1982
Organic Carbon/Matter (Heanes)	R&L 6B1
Phosphorus Buffer Index (PBI)	R&L 9I2a
Potassium (Nitric)	R&L 18C1
pH (CaCl ₂)	R&L 4A1
pH (H ₂ O)	R&L 4B1
Texture & Colour	Northcote (1979), Munsell
Sulphur (MCP)	R&L 10B3
DTPA Extract (Cu, Fe, Mn, Zn)	R&L 12A1
Zinc (HCl)	R&L 12D1
Electrical conductivity	R&L 3A1
EC _{se}	In house
Dispersion index	In house
Chloride (H ₂ O)	R&L 5A2a
Calcium Carbonate	In house
SUGAR SUITE 3	
Phosphorus (BSES)	R&L 9G2
Phosphorus (Colwell)	R&L 9B2
Exchangeable Cations (Al, Na, K, Ca, Mg)	R&L 15D3, 15G1
Silicon (BSES)	R&L 13D2
Silicon - Plant Available (CaCl ₂)	ASA 1982

SUGAR SOIL PACKAGES

PARAMETER	METHOD REFERENCE
Organic Carbon/Matter (Heanes)	R&L 6B1
Phosphorus Buffer Index (PBI)	R&L 9I2a
Potassium (Nitric)	R&L 18C1
pH (CaCl ₂)	R&L 4A1
pH (H ₂ O)	R&L 4B1
Texture & Colour	Northcote (1979), Munsell
Sulphur (MCP)	R&L 10B3
DTPA Extract (Cu, Fe, Mn, Zn)	R&L 12A1
Zinc (HCl)	R&L 12D1
Electrical conductivity	R&L 3A1
EC _{se}	In house
Dispersion index	In house
Chloride (H ₂ O)	R&L 5A2a
Calcium Carbonate	In house
Nitrate-N (KCl)	R&L 7C1b
Ammonia-N (KCl)	R&L 7C2a
Boron (CaCl ₂)	R&L 12C2

INDIVIDUAL SOIL TESTS

PARAMETER
Acid Neutralising Capacity
Ammonia-N (KCl)
Boron (CaCl ₂)
Bulk Density
Chloride (H ₂ O)
Dispersion Index
DTPA Cadmium
DTPA Extract (Cu, Fe, Mn, Zn)
EC _{se}
Electrical Conductivity
Emerson Aggregate Test

INDIVIDUAL SOIL TESTS

PARAMETER

Exchangeable Cations (Al, Na, K, Ca, Mg)
Moisture
Molybdenum (CaCl ₂)
Nitrate-N (KCl)
Organic Carbon/Matter (Heanes)
P Sorption Index
Particle Size Discrimination (Sand, Silt, Clay)
pH (CaCl ₂)
pH (H ₂ O)
Phosphorus (BSES)
Phosphorus (Colwell)
Phosphorus Buffer Index (PBI)
Potassium (Colwell)
Potassium (Nitric)
Silicon - Plant Available (CaCl ₂)
Silicon (BSES)
Sodium Absorption Ratio (SAR)
Sulphur (KCl)
Sulphur (MCP)
Texture & Colour
Total Nitrogen
Wettability
Zinc (HCl)

PLANT TISSUE SUITES

PARAMETER

SGS101 COMPLETE PLANT TISSUE ANALYSIS
Nitrogen
B, Ca, Co, Cu, Fe, K, Mg, Mn, Mo, Na, P, S & Zn
Nitrogen
B, Ca, Co, Cu, Fe, K, Mg, Mn, Mo, Na, P, S & Zn
Nitrate-N
Chloride in biota

PLANT TISSUE SUITES

PARAMETER

Chloride in biota	
Nitrate-N	
Total Nitrogen	
Minerals Base Price (1 Element)	
Minerals (Cost per extra element)	
SGS102 COMPLETE PLANT (PLUS) TISSUE ANALYSIS	
Nitrogen	-
B, Ca, Co, Cu, Fe, K, Mg, Mn, Mo, Na, P, S & Zn	-
Nitrate-N	-
Chloride in biota	-
Chloride in biota	-
Nitrate-N	-
Total Nitrogen	-
Minerals Base Price (1 Element)	-
Minerals (Cost per extra element)	-

FRESHCARE

PARAMETER

MA1 - FRESHCARE SUITE	
MICROBIOLOGY	-
E. Coli (Escherichia Coli)	-
T. Coliforms (Total Coliforms)	-
F. Coliforms (Faecal Coliforms)	-
Total Plate Count (HPC)	-

IRRIGATION SUITES

PARAMETER

BASIC IRRIGATION SUITE	
pH, Conductivity (EC)	-
Total Dissolved Solids (calc)	-
Alkalinity	-
Hardness	-
Chloride	-
Sulphur and SO ₄	-
SAR	-
Mole Ratio	-
Metals and Metalloids	-
Al, As, B, Ca, Cr, Cu, Fe, K, Li, Pb, Mg, Mn, Na, Ni & Zn	-
STANDARD IRRIGATION SUITE	
pH	-
Conductivity (EC)	-
Total Dissolved Solids (calc)	-
Alkalinity	-
Hardness, Ca & Mg	-
Chloride	-
Sulphur and SO ₄	-
Flouride	-
Nitrate	-
Nitrite	-
SAR	-
Mole Ratio	-
Total Kjeldahl Nitrogen (TKN)	-
Phosphorus (total)	-
Langlier Saturation Index	-
Ryznar Index	-
Metals and metalloids	-
Al, As, B, Ca, Cr, Cu, Fe, K, Li, Pb, Mg, Mn, Na, Ni & Zn	-
COMPLETE IRRIGATION SUITE	
pH	-
Conductivity (EC)	-
Total Dissolved Solids (calc)	-
Alkalinity	-

IRRIGATION SUITES

PARAMETER

Hardness	-
Chloride	-
Sulphur and SO ₄	-
Fluoride	-
Nitrate	-
Nitrite	-
SAR	-
Mole Ratio	-
Total Kjeldahl Nitrogen (TKN)	-
Phosphorus (total)	-
Langlier Saturation Index	-
Ryznar Index	-
Microbiological	-
Faecal Coliforms	-
Metals and Metalloids	-
Al, As, B, Be, Ca, Cd, Cr, Co, Cu, Fe, K, Li, Pb, Mg, Mn, Mo, Na, Ni, Se, U, V & Zn	-
Mercury	-

STOCK SUITES

PARAMETER

BASIC STOCK PROFILE SUITE

pH
Conductivity (EC)
Total Dissolved Solids (calc)
Alkalinity
Hardness
Chloride
Sulphur and SO ₄
Fluoride

STOCK SUITES

PARAMETER

Nitrate

Nitrite

Metals and Metalloids

Al, B, Ca, Cr, Co, Cu, Fe, K, Mg, Mn, Na, Ni & Zn

COMPLETE STOCK SUITE

pH

Conductivity (EC)

Total Dissolved Solids (calc)

Alkalinity

Hardness

Chloride

Sulphur and SO ₄

Fluoride

Nitrate

Nitrite

Microbiological

Faecal Coliforms

Metals and Metalloids

Al, As, B, Be, Ca, Cd, Cr, Co, Cu, Fe, K, Pb, Mg, Mn, Mo, Na, Ni, Se, U, V & Zn

MANURE

PARAMETER

MANURE SUITE

pH

Conductivity (EC)

Total Nitrogen

Nitrate

Ammonia

B, Ca, Co, Cu, Fe, K, Mg, Mn, Mo, Na, P, S & Zn

Phosphate

Organic Carbon

RADIOCHEMISTRY

PARAMETER

Gross alpha and beta activity in Liquids
Gross alpha and beta activity in Solids
Analysis of radon in water samples by liquid scintillation counting
Radium-226 determination in water by liquid scintillation counting
Simultaneous determination of Radium-226 and Radium-228 in water by liquid scintillation counting
Lead-210 determination in water samples by liquid scintillation counting
Analysis of gamma ray emitting radionuclides in solids
Analysis of gamma ray emitting radionuclides in liquids
Uranium Isotopes (U-238, U-234, U-235)
Thorium isotopes (Th-232, Th-230, Th-232)
Both uranium and thorium isotopes (U-234, U-235, U-238 & Th-232, Th-230, Th-232)
Polonium-210
Complex sample preparation (for solid samples only)
Density correction for solid matrix (if required)
U-238, U-235, Th-232, K-40, Rb-87 by Activity Conversion from elemental concentration via ICPMS analysis for metals in Liquid Samples:
U-238, U-235, Th-232, K-40, Rb-87 by Activity Conversion from elemental concentration via 4 Acid Digest analysis for metals in Solid Samples - First sample cost
U-238, U-235, Th-232, K-40, Rb-87 by Activity Conversion from elemental concentration via 4 Acid Digest analysis for metals in Solid Samples - subsequent sample cost
Certification of food samples for radioactivity
Assessment of wipes by gross counting (alpha/beta/gamma)
Specific radionuclide determination of wipes by gamma ray spectrometry
Assessment of wipes by liquid scintillation counting (H-3, Ni-63, Fe-55, Cd-109)
Ten wipes kit
Box of 250 wipes
Gross alpha and beta counting of HVAS filters
Gross alpha and beta counting of personal filters
Specific radionuclide determination of personal or HVAS filters by gamma ray spectrometry
Issue and analysis of radon coils
Issue and analysis of radon track etch monitors

CONSUMABLES

ITEM	PRODUCT CODE
0.45µm syringe filter	-
10mL Therumo syringe	-
50mL Therumo syringe	-
Asbestos fibre count preloaded cassette-0.8µ	225-326
Depositional dust 200mm glass funnels	-
Depositional dust stoppers	-
DPM 37mm 3pc preloaded cassette with Quartz filter	225-401
Dust, metals or Resp Silica or Hex Cr on PVC filter only-5µ 25mm	225-8-04
Dust, metals or Resp Silica or Hex Cr on PVC filter only-5µ 37mm	225-8-01-1
Dust, metals or Resp Silica or Hex Cr on PVC filter only-5µ 47mm	225-809
HVAS filter (Glass or Silica) Pre - Weight and label	
HVAS Glass fibre filter	GB 100R
HVAS Silica filter	QR100
Inhalable Preloaded and labelled cassette with filter	225-71A, 225-8-04
IOM Inhalable PM sampler and cassette	225-70A
Respirable Cyclone with 25mm cassette	225-69
Respirable Preloaded and labelled cassette with filter (for use with 225-69 cyclone)	225-62, 225-8-04
Trip blank soil supply per jar	-
Trip spike soil supply per jar	-
Welding fumes preloaded MCE cassette-0.8µ	225-3-01
Air-O-Cell Air Impaction Cassette (per unit)	Zefon AOC
BioTape (per unit)	Zefon BT

SAMPLING

ACTIVITY

MEDIA

Solid waste sampling and characterisation for landfill disposal	Solid waste
Trade waste sampling & analysis	Water/solid wastes
Routine NATA Accredited sampling (potable, surface, ground, bore, environmental)	Water
Sampling & Analysis of Gases from process lines	Gases
Sampling & Analysis of liquified gasses from process lines	Gases
Sampling & Analysis of liquified gasses from storage tanks	Gases
Sampling & Analysis of landfill gases	Gases
Stack sampling & Analysis for compliance testing	Gas/particulates
Sampling and analysis of products from chemical industrial processes	liquid/solid



Important information

Quality

SGS, as a provider of services to the environmental industry in Australia, fully appreciates the requirements for NATA testing and reporting. Consequently, all our environmental testing laboratories seek and maintain NATA accreditation. A list of the all accreditations held by SGS may be found at www.nata.asn.au

The parent company, SGS Australia Pty Ltd, has a quality system certified to ISO:9001. All our laboratories maintain ISO/IEC 17025:2005 accreditation.

Service at SGS

The following services are included when choosing SGS as your service provider:

- Sample containers and eskies for the return of samples to SGS at no extra charge
- SGS is able to organise all aspects of sample logistics
- A completely independent testing service
- A sample receipt acknowledging sample condition, expected reporting date and sample analysis table
- Access to SGS technical knowledge through its 90,000+ employees
- Final results are provided in PDF and Excel® formats. Custom formats are available if required

Please contact SGS for details.

General information

SGS Environment, Health and Safety services is a quality assured international company that offers a wide range of technical services tailor-made to the needs of our clients. If the service you require is not listed here please call your closest Environment, Health and Safety services office and we will be able to advise which SGS facility or partner has the capacity to undertake the analysis.

Confidentiality

We are acutely aware of the possible sensitive nature or legal ramifications of some environmental investigations therefore it is our policy that all client Information is held in strictest confidence.

Chain of custody/ analysis request

All requests for work must be received in writing with the samples. The turnaround time commences once the completed analytical request paperwork with clear instructions plus all the samples have been received. For a Chain Of Custody (COC) form please contact our Sample Receipt Team. For purposes of determining due date, samples received after 3pm Monday through to Friday are deemed to have been received the following working day. The first day of receipt is classed as day zero.

Sampling

The highest quality analysis available is of reduced value if the sample is not representative of the target area. SGS assists with advice and with the provision of clean, labelled and pre-dosed sample containers at no charge. If SGS provides sample conveyances (eskies), it is done as a value-added service and the eskies remain the property of SGS at all times. They must be returned to SGS within a reasonable time period. Unless SGS has issued written authorisation to the contrary, they must not be used for any other purpose other than transporting samples to SGS. SGS reserves the right to charge for the recovery of eskies that are not being used for their intended purpose.

Sample receipt advice

A sample receipt advice is emailed upon registration of your batch of samples into our Laboratory Information Management System (hereafter named LIMS). This details the sample condition on arrival at the laboratory, expected analysis completion date and a SGS job number for tracking purposes. Please make reference to this number if you need to make any enquiries about your project.

Methodology

SGS is NATA accredited to ISO/IEC 17025. Our analytical procedures are standardised and validated. Typically, they are referenced to AS, NOHSC, USEPA, APHA, NIOSH and OSHA.

Quality control

SGS EHS services prides itself on its data validity. A comprehensive range of different QC samples are analysed with the samples. For a summary of the frequency and description of the QC samples plus QA criteria, please refer to our QA/QC summary document which can be supplied on request.

Limits of reporting

It is the client's responsibility to advise SGS if specific Limits of Reporting (LOR) are required otherwise SGS will perform the analysis to routine or general industry accepted limits. Most analyses become more expensive and time-consuming as the detection limits are lowered and will incur extra charges. In some cases specified detection limits may not be achievable if the sample contains interferences or, in the case of soils, has high moisture content.

Accreditation

All SGS EHS laboratories are NATA accredited (Accreditation No 2562) and are fully compliant with ISO/IEC 17025 standards. The laboratories current NATA scope of accreditation can be viewed at <http://www.nata.asn.au/>

Advice

Should advice be required on the appropriate choice of analytical techniques or interpretation, please contact your local SGS representative.

Pricing policy

SGS' invoices may contain the following Itemised amounts:

- Analysis charges
- Administration fee
- Sample disposal fee
- Goods and Services tax (GST)

In addition depending on your circumstances the following itemised amounts may occur:

- Prices are based on at least of 50% of the stated volumes being provided or additional costs may be incurred
- Urgent turnaround charges if applicable

- Quarantine and customs clearance charges for overseas/ interstate samples
- Freight costs (for bottle provision and/ or sample return)
- Sample storage fees for long term storage

SGS reserves the right to modify prices or specifications as set out in the current price list without notice. SGS quotation numbers must be referred to in all correspondence.

All existing quotes will remain current until the stated validity period has elapsed unless otherwise advised. SGS may have a minimum charge inclusive of the administration charge.

The price list(s) is/are specifically for soil, sediment, water, trade waste and air samples. Extra costs may be incurred for highly contaminated or difficult matrices such as sludges or saline waters where additional clean-up is required to remove the interferences. Extra costs may also be incurred when low level or trace analysis is requested, and the sample is found to contain high levels of pollutants.

Minimum fee per sample batch for SGS account holders may apply. Minimum fee per sample batch for COD or non SGS account holders applies.

Long-term quotations

Prices in quotations that span periods longer than 12 months will be subject to annual price review.

Sample storage

Soil samples will be kept for 2 months, bulk soils (>500g) for 1 month and water samples for 1 month from the date reported. Highly impacted or difficult to dispose of samples will be returned to the client. Please advise on the Chain of Custody if extended storage is required otherwise the samples shall be disposed of without notice after the free storage period has elapsed. SGS reserves the right to charge for additional sample storage and environmentally safe sample disposal. Samples requiring storage in excess of our standard period will incur a charges per sample per month.

Samples received for holding that do not require analysis will be charged a hold fee per sample. A waste disposal fee per sample will be charged for all soil, sludge and water samples. Quarantine samples will be charged per sample for safe and compliant disposal.

Quarantine

SGS is approved by AQIS to hold quarantined samples and has a license to import water and soil samples from all countries. A quarantine fee may apply per batch of samples received from outside Australia and potentially for those received from interstate. These samples must be biologically destroyed before disposal or release, potentially discounting their suitability for further analyses.

Freight costs

All prices/services quoted are exclusive of the freight costs which may be incurred in relation to bottle/sample provision and/or return to clients. Within the Metropolitan areas of Cairns, Brisbane, Sydney, Melbourne, Adelaide and Perth, SGS may choose to cover the courier service costs for the standard service level with one of our preferred freight providers; costs may be passed on for any special, regional or expedited services. Please note service level names (such as Overnight) are not necessarily indicative of transit times. It is the Clients responsibility to declare if any consignments contain dangerous goods or if they are under Quarantine conditions, any consequences from a failure to declare will be borne by the client.

Please consider the time taken for freight to be sent by road.

Third party engagement

SGS may facilitate additional Third-Party Services, such as Freight or subcontracting analysis outside of our scope, but does so on our clients' behalf. As such, SGS accepts no responsibility for any losses, including consequential losses, that arise from the use of these services.

This includes but is not limited to Loss or Damage in transit for Freight, and Analytical errors, Omissions or other Failures from third party laboratories. By agreeing to SGS facilitating third party services on your behalf, you agree to and are bound by the third parties Terms and Conditions; a copy of these Terms and Conditions will be provided when requested.

If you do not agree to the Third-Party Engagement terms, please notify us in writing prior to the Project commencing, and we will plan for you to engage these services directly.

Turnaround time

Our standard turnaround times are typically 5 working days for routine soil and water samples.

Analysis subcontracted to an external laboratory may take longer.

We appreciate that there will be occasions when expedited services are required. These will attract surcharges as listed in the table below.

Please contact the laboratory before samples are submitted if you have any fast turnaround requirements or large sample batches to ensure that your requirements can be met.

For the purposes of determining due date, the day of receipt is assigned as day zero. Samples received after 3pm Monday through to Friday are deemed to have been received the following working day. In the case of leachates, allow two (2) days leachate preparation time on top of the requested rush time.

Reporting

Results will be provided as a NATA endorsed report where appropriate and possible. On completion of analysis the report will be emailed to you. Electronic data transfer is available in both PDF and delimited text formats. Specific reporting formats may be available upon request. SGS reserves the right to charge for the issue of hardcopy reports per report plus postage costs.

Payment

Payment is required within thirty (30) days of date of invoice for clients with an account with SGS. Clients without an account or who have submitted a credit application with approval pending must pay prior to or at the time of submission of the samples to the laboratory.

SGS reserves the right to discontinue work on behalf of any client who fails to pay any of the invoices rendered by SGS within the time specified.

Payment can be made by cheque, cash or credit cards (Mastercard or Visa).

Please note American Express and Diner's Club are not generally accepted (or additional fees may apply).

Applicable law & jurisdiction

All disputes arising out of, or in connection with, any work undertaken by SGS for you, is governed by and construed in accordance with the substantive laws of Western Australia exclusive of any rules with respect of conflict of laws and shall be submitted to the exclusive jurisdiction of the competent courts of Perth, Western Australia.



When you need to be sure

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6105 Australia

1300 781 744

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SGS