

Plant performance and environmental services

HRL is a leading supplier of consulting and testing services to the coal, power generation and energy intensive industries.

Our plant measurement and environmental sampling capabilities are routinely applied to the power generation, mineral processing, cement, pulp and paper and petrochemical industries throughout Australia and neighbouring countries.

The plant and environmental teams work closely with other HRL specialists, including process and materials engineers and chemists, to ensure that our clients achieve the best possible outcome from our services.

Plant Performance Measurement

HRL measures the performance of plant against design specifications or guarantees and provides diagnostic testing services. We perform detailed and accurate measurements of the pressure, temperature and flows of process streams including gas composition, particulate loading and size distribution and analysis. Testing is according to accepted Australian or international codes.

HRL also develops techniques and measurement equipment to meet specific client requirements.

Our engineers and technical staff are experienced in working in demanding environments and meeting the challenges often encountered in plant testing and sampling programs.

Examples of plant tested by HRL include:

- All types of Combustion Boilers and Furnaces
- Steam and Gas Turbines, Generators, Engines
- Calciners, Fluid-beds, Rotary Kilns, Smelters
- Mills, Concentrators, Separators and Classifiers
- Dust Collection Equipment - Bag Filters, Scrubbers, Electrostatic Precipitators, Hot Gas Filters, Cyclones
- Pumps and Fans, Quench Towers, Cooling Towers
- Heat Exchangers, Condensers, Air Heaters, LP and HP Steam/Water Heaters



Environmental sampling

Equipment

HRL maintain and utilise modern gas analysers and isokinetic stack sampling equipment. We also design and construct specialised probes and equipment for difficult sampling problems.

HRL also has isokinetic sampling equipment capable of sampling large volumes of particulates within high temperature environments including combustion boilers. Collected dusts can be analysed for particle size analysis and chemical and physical properties.

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Emission sampling and process monitoring

Our environmental and process sampling teams conduct stack and ambient sampling and atmospheric modelling for industry.

HRL is accredited by NATA for a comprehensive list of gaseous and particulate emissions sampling and analysis activities to ISO/IEC 17025. US EPA sampling methods are also used. Examples include:

- Particulate Emissions (including PM10 and PM2.5)
- Moisture content, CO, O2, SO2, NOx (NO, NO2)
- H2SO4 Mist (including SO3) and SO2
- Halogens and Hydrogen Halides
- Metals emissions (including Hg, As, Se and Pb)
- H2S, NH3, HCN, Cr(VI), etc
- Reduced sulphur species, COS, CS2, mercaptans
- Dioxins and furans
- Semi-Volatile Organic Compounds (SVOC)
- Volatile Organic Compounds (VOC) (b.p. <100°C)
- PAHs, PCBs, BTEX, Aldehydes and Ketones, etc

Fluid-flow and Air Quality Modelling

HRL has staff fully trained in the use of AUSPLUME, TAPM and CALPUFF for air quality modelling problems. Our computational fluid dynamics (CFD) specialists solve problems where a detailed simulation of fluid flow behaviour is required.

National Pollutant Inventory (NPI)

HRL provide the full range of sampling and consultancy services to assist clients in meeting their NPI reporting requirements, including preparation of annual returns.

Ambient Air Monitoring

Ambient air monitoring services including particulate sampling and work-place (personal) monitoring.

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Need more information? Go to hrl.com.au

The company's NATA Accredited Laboratories number is 561.

HRL Technology Group's ISO 9001 Quality Management is certified by BSI under certificate FS605116

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