Jones & Wagener
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ENVIRONMENTAL SCIENCES AND MANAGEMENT CAPABILITY STATEMENT

Jones & Wagener is a firm of consulting civil engineers and environmental scientists, established in 1966 Our Environmental Sciences and Management capabilities are discussed below in more detail.

ENVIRONMENTAL SCIENCES AND MANAGEMENT

The Environmental Sciences and Management division provides a holistic approach towards environmental sustainability by implementing responsible environmental management to support long term sustainability and ensure legal compliance.

As part of environmental management, we undertake all environmental regulatory authorisations, approvals and licensing processes and their associated support requirements. Staying compliant within the legislative framework can be extremely challenging and onerous for developers. We offer an integrated authorisation process service. Close collaboration between our engineers and scientists ensures that our clients experience a seamless process for the optimal solution.

Our geochemists and hydrogeologist are experts in the assessment and remediation of contaminated land. We have worked with a wide range of contaminants including DNAPL's, POP's, PAH's, BTEX, Cyanide, Mercury, Arsenic and radioactive trace elements amongst others. We provide baseline and brownfield hydrogeological investigations for mining and industrial facilities. Other scientific services offered include waste classifications and specialist soil, land capability, visual, hydrological, surface water and wetland delineation assessments.

The Environmental Sciences and Management division and the various engineering divisions work closely together on projects to ensure that the solutions adopted and infrastructure designed are optimised in terms of environmental considerations.

Hydrogeological Assessments

Fieldwork investigations

- Geophysics: gravity, resistivity, electromagnetics, magnetics, radar
- Soil / waste sampling and analysis: including waste classification, XRD, XRF, ACID base accounting etc.
- Hydrocensus; identifying groundwater users and collecting borehole data.
- Borehole drilling: percussion / mud rotary / odex / sonic / diamond drilling
- Pump testing: determine aquifer parameters

Sampling and analysis

- Inorganic, organic, trace elements, radioactivity, stable isotopes, biological and toxicity

Modelling

- Conceptual models
- Flow modelling (including impacts associated with mine dewatering / post closure filling)
- Geochemical modelling
- Mass transport modelling
- Modelling of the effectiveness of mitigation measures.

Mitigation measures

- Source removal or isolation
- Cut-off systems / Dewatering and treatment
- Reinjection
- Waste stabilisation
- Natural attenuation

Design and implementation, along with the monitoring of the effectiveness of mitigation measures

Hydrology and Surface Water Assessments

We pride ourselves on developing solutions that:

- Provide an optimised design up-front in order to optimise water management over the life of the project and operation
- Maximise the solutions that minimise environmental impacts of projects, such as river diversions, by creating designs that blend into the environment, hence being environmentally acceptable

Specific services include:

- Hydrological investigations
- Flood risk assessments
- Water and salt balance modelling
- River diversion designs
- Storm water management
- Clean and dirty water separation system design, including clean water diversion systems and pollution control measures, such as collection canals (lined and unlined), silt traps, and pollution control dams
- Hydraulic structures
- Water transfer infrastructure, including pump-stations, pumps and pipelines
- GN704 audits and Best Practice Assessments