

Best practice waste management for environmental peace of mind

EnviroServ is South Africa's oldest and most respected waste management solutions provider. *MechChem Africa* talks to the company's CEO, Dean Thompson, profiles the company and highlights some successes.

Since EnviroServ opened its doors in 1979 it has pioneered many waste management solutions, some of which are still recognised as best practice today. "We strive to look for better ways of doing things. From our forward thinking founders who had social consciences, this has become deeply embedded in our culture – and these are the kinds of people we still employ," says Dean Thompson, the company's CEO.

Today, EnviroServ serves all nine provinces of South Africa and several African countries across all industries. "But we started out on a much smaller scale, as a privately-owned door-to-door waste collection and disposal service with a willingness to tackle difficult operational conditions and to service disadvantaged black townships during turbulent political times," Thompson tells *MechChem Africa*.

In 1990, the company commissioned its first industrial waste disposal site at Holfontein in Johannesburg, which was established in accordance with the Department of Water Affairs' Minimum Requirements. Today, the Holfontein Hazardous Waste Disposal Site treats and disposes of high-hazard wastes in compliance with a waste management licence issued in terms of

the National Environmental Management: Waste Act, 2008.

Holfontein provides an integrated, full-service waste management facility that can receive, store, re-use, recycle, recover and treat Type 1 (high risk) to Type 4 (inert) wastes, as well as provide for the final disposal of both general and hazardous wastes in sites with the appropriate containment barrier design.

Turning back to the company's legacy, Thompson says that the acquisition of Waste-Tron in 1996 began EnviroServ's expansion in South Africa, giving the company a strong foothold in KwaZulu-Natal. Further acquisitions include: Waste-tech in 1997, which firmly established EnviroServ's formidable national presence; Conquip Hire, which specialises in compaction plant and equipment and now operates as an internal EnviroServ company at its landfill facilities and on contract for clients; the 2003 acquisition of Abzorbit, an emergency high-risk spill response company; and EnviroServ Tailings, a company specialising in the construction and management of tailings dams for mines.

Among the waste streams accepted by landfill sites such as Holfontein are industrial chemicals, condemned foodstuffs, contaminated soils and general household waste.



These sites are classified as H:h – Class A landfill for the safe disposal of high-risk chemical substances – and they are licensed by the Department of Environmental Affairs, which specifies the types of waste that can be processed.

Where needed, EnviroServ has also secured Waste Management Licences to operate on-site effluent treatment plants, for the treatment of leachate, for example, which is done according to legally prescribed rules governing the quantity and quality of leachate than can be processed and disposed.

EnviroServ is required to conduct regular internal audits, pay for external audits by an independent company, and allow access to its sites at any time for the Department to conduct any audit or inspection as it chooses. In addition, EnviroServ itself conducts routine surveillance in the following areas: ground and surface water monitoring; occupational health monitoring; air quality monitoring; worker exposure monitoring; and landfill gas monitoring. Some of these are license or legal requirements.

All 11 owned or managed landfill sites in South Africa and Africa are run according to international best-practice standards with the aim of minimising risk to the environment through responsible management practices. Minimum impact to the environment is the company's primary goal, with reduction, reuse, recycling, and recovery being some of the tools used to achieve this.

The landfill facilities are designed to exacting specifications by civil engineers, and are operated and monitored by expert engineers, scientists and other industry specialists who are tasked with ongoing geo-technical assessments of soil and ground structures, geo-hydrological assessments of ground



Above: As a company whose waste management strategy includes diverting waste from landfill, EnviroServ has a number of initiatives that ensure the reuse, recycling and reduction of waste.

Right: A company's waste plan needs to consider strategic placement of collection containers as well as staff and logistics to empty full containers or assemble full containers at bulk transfer areas.

Below right: EnviroServ's Industrial Cleaning Services has a fleet of vacuum trucks to offer industrial services such as sump desludging to large, medium and smaller-sized customers.

water, and scientific testing of the nature of waste that is disposed of.

The structure of the landfill cells conforms to industry regulation specifications, and all cells are built with double composite liners that include plastic high-density polyethylene (HDPE) membranes with naturally compacted clay liners (CCL).

Before waste can be disposed of by EnviroServ, it is assessed by the company's laboratory in Johannesburg. In February 2012, this waste laboratory became the first in South Africa to receive SANAS accreditation. It is accredited according to the ISO/IEC 17025 standard for waste analysis and is able to offer expert advice on the testing and handling of hazardous waste materials.

The laboratory offers a full range of environmental testing services to assess solid, liquid and sludge waste. The work of the laboratory can also guide decisions on waste processing options – whether re-use, recycling or recovery are suitable or possible in any particular instance, for example. It is also able to guide decisions on the safe transportation, handling, storage, treatment and disposal of the waste.

EnviroServ is certified and compliant with international standards such as ISO 9001 for quality and 14001 for environmental management; the OHSAS 18001 safety standard as well as the Chemical & Allied Industries Association Responsible Care and Safety & Quality Assessment System (SQAS).

"We also take responsibility for rehabilitation and post-closure monitoring of all our



end-of-life sites after they have been decommissioned," says Thompson.

"Our services, products and solutions are comprehensive, enabling us to offer customers full turnkey or specially tailored options relevant to their specific operations and industries, including: waste assessments, analysis and classification, including onsite waste management; collection, treatment and disposal of a wide category of waste; industrial cleaning, including the application of appropriate absorbent spill control products to deal with spills caused by chemicals and marine and aquatic incidents; and tailings management.

"From being the first and only company to tackle some of the most difficult waste management issues in South Africa, we've come to understand that sustainable waste management is not a finite concept. It evolves with society's needs, habits, and awareness of health and environmental prosperity," says Thompson.

"As a result, EnviroServ is continuously improving. New lifestyles, new technologies, new waste, larger waste volumes, new legislation and new waste management thinking all create fresh possibilities and challenges," he concludes. □



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