

# Environmental developments affecting our industry

*The South African aggregate industry is a critical supplier of primary construction materials utilised by all South African citizens in their daily lives. Over the last 25 years, the aggregate industry has functioned in a continually evolving environmentally-aware society where legal prescription has been increasing at an almost exponential rate. This paper briefly discusses some of these environmental legal requirements and proposes a mechanism for the early identification of requirements, associated risks and their successful mitigation.*

*by Alan Cluett (Pr.Sci.Nat) and Colleen Cluett (M.Sc)*

**I**n November 1992, the then Anglo-Alpha established the first Aggregate and Cement Industry Environmental Department. Reporting to the technical director of the group, the incumbent was given free reign to lead the company forward in the 'new industrial discipline' of environmental management.

At this time, environmental legislation was limited to components of the Water Act (1956); the Environment Conservation Act (1989); elements of the Conservation of Agricultural Resources Act (1983); the Atmospheric Pollution Prevention Act (1965) and a handful of miscellaneous regulations contained in assorted uncoordinated Acts, Provincial Ordinances

and Municipal By-laws. Environmental management, from a legal perspective, was relatively simple. South Africa was in fact seriously lagging behind the rest of the industrialised world in environmental management as a function of the economic sanctions imposed on the country due to apartheid.

In 1994, following the first democratic elections in the country, economic and other sanctions were lifted. South African products enjoyed unprecedented access to international markets but were soon to be subjected to a different form of sanction, a little-understood or prepared-for sanction, namely, environmental sanction.

Suddenly South Africa had to align her environmental processes and legislation with her competitors in the new-world market, opening up to her in the post-apartheid period.

*Environmental legislation is applicable to all surface mines.*





In 1996, the International Standards Organisation (ISO) released its ISO Environmental Management Series including the ISO 14 001 Environmental Management System. South Africa was represented on the ISO panel through Technical Committee 207 (TC2207)<sup>1</sup>. Although enthusiastic participants, the South African Committee (TC207) were likened to a volume control on a TV – much noise but no effect on the picture.

<sup>1</sup> Alan Cluett was a contributor to TC207.

### Environmental legislation

With the 1994 elections, a new world of opportunity opened up for South Africa and South African businesses. Economic sanctions were a thing of the past; however, environmental sanctions were the new operating constraint.

In 1996, we saw the introduction of the Constitution of South Africa with Section 24 effectively ensuring the right

of all to an environment that is not detrimental to their health or wellbeing, for both present and future generations.

From 1998, South Africa saw the introduction of a constant and mounting stream of new environmental legislation, all subordinate to the Constitution that serves to give effect to this basic right. These Acts include, to name a few:

- The National Water Act, 1998 (NWA) as amended.
- The National Environmental Management Act, 2003 (NEMA) as amended.
- The Mineral and Petroleum Development Act, 2002 (MPRDA) as amended.
- The National Environmental Management: Air Quality Act, 2004 (NEM:AQA) as amended.
- The National Environmental Management: Waste Act, 2008 (NEM:WA) as amended.

Of course, these Acts came with numerous

regulations of which a number are applicable to our industry. In fact, there are more than 27 Acts of Parliament with environmental legislation that may be applicable to most surface mining industries. There are a number of regulations that are equally applicable and, in themselves, carry severe penalty for non-compliance.

Consider, for example GN R59 (10 July 2014) made under NEMA, namely: GN R549: Regulations to Phase-out the Use of PCB Materials and PCB Contaminated Materials, 2014.

The sub-regulation of GN R549 states:

#### 10. Offences and Penalties

(1) A person is guilty of an offence if that person contravenes Regulation 3, 4, 5(1), 5(5), 6(1), 6(2), 6 (4), 7, 8 or 9 of these regulations.

(2) A person convicted of an offence in terms of Sub-Regulation (1) is liable to a fine not exceeding R10-million or to imprisonment for a period not exceeding 10 years, or to both such fine and imprisonment.

*There are dire consequences of non-compliance with legal requirements as well as personal liability for restoration/rehabilitation costs and possible compensation to affected parties.*



Consider also Regulation 704 (4 June 1999) of the National Water Act, 1998, Regulations on Use of Water for Mining and Related Activities aimed at Protection of Water Resources.

Sub-Regulation 4 defines where a mine may locate mining-related infrastructure relative to 'any water course or estuary, borehole or well, excluding boreholes or wells drilled specifically to monitor the pollution of groundwater, or on water-logged ground, or on ground likely to become water-logged, undermined, unstable or cracked,' clearly defining the '1:100-year flood line or within a horizontal distance of 100 m'.

Of course it is little known that Regulation 704 was preceded by similar regulation contained in Regulation 287 of 1976, which made the following restriction: 'plus the maximum precipitation to be expected over a period of 24 hours with a frequency of once in a 100 years ...'

Environmental legislation is currently one of the most complicated and dynamic fields of legislation in South Africa. It is applicable to all surface mines and Aspasas members to a greater or lesser degree. It is a critical business success factor that is ignored or played down at the personal risk of anyone or a combination of the following persons if convicted in a court of law: the 'owner', the 'person in control of the land', anyone 'directly responsible' or 'indirectly responsible' or 'negligent'.

### Environmental sanction

A workshop was recently hosted by the Department of Mineral Resources (DMR) in KwaZulu-Natal and included presenters from different fields of government: the Department of Mineral Resources; the Department of Water and Sanitation; the Department of Environment Affairs; and the newly-formed Department of Mineral Resources Directorate – the Directorate Enforcement and Compliance.

At this workshop, reference was frequently made to 'Ten/Ten', that is the environmental penalty applicable to individuals in their personal capacity if convicted in a court of law; namely, to a fine not exceeding R10-million or to imprisonment for a period not exceeding 10 years, or to both such fine and imprisonment.

Cluett Consulting points out that this reference to 'Ten/tTen' omits a significant portion of the potential sanction/penalty if convicted; that is, the additional requirement to cover the costs associated with remediation or possible compensation for affected parties. The latter could run into several millions of rand in the event of, for example, a diesel spill from a 23 000 l tank.

In terms of the Mineral and Petroleum Development Act (2002), Sections 45, 46, 47 and 93 are often overlooked or forgotten:

- **Section 45:** Minister's power to recover costs in the event of urgent remedial measures.
- **Section 46:** Minister's power to remedy environmental damage in certain instances.
- **Section 47:** Minister's power to suspend or cancel rights, permits or permissions.
- **Section 93:** Orders, suspensions and omissions.
- **Sections 45 and 46** are consistent with legislation contained in the NEMA, the NWA, the NEM:AQA, NEM:WA and other environmental legislation. While Sections 47 and 93 have far more consequence to the organisation, operation, its management and employees than a more

understood and better experienced Mine Health and Safety Act (1996) Section 54 or Section 55 has.

The consequences for non-compliance with mining and environmental legislation are severe and should best be well understood and addressed.

### Directorate Enforcement and Compliance

In October 2016, a new Directorate reporting directly to the Director General of the DMR was established, namely the Directorate Enforcement and Compliance. The new Directorate is named by persons of high qualification whose mission is enforcement and compliance. The organogram for the Directorate is not currently available to the public but is interpreted by Cluett Consulting as looking somewhat like *Figure 1*.

Salaries, derived from the human resource advertisements placed on the DMR web page are included in *Figure 1*, and give an indication of the calibre of persons who populate the Directorate.

Personal experience gained by the authors at the DMR Environmental Practitioners Workshop held in Durban on 9 March 2017, are summarised in a quotation from one of the Directorate members present: "I am a person you do not want to see at your operation. I am the person you

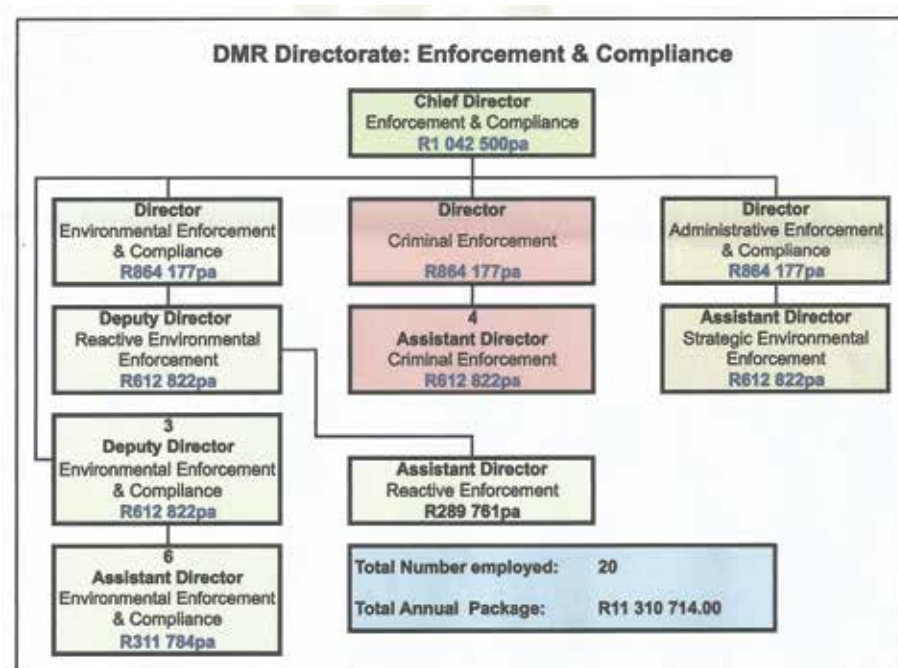


Figure 1: DMR Directorate: Enforcement and Compliance (Cluett Consulting).



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do not want to receive a letter from. I am the person you do not want to receive a telephone call from."

**Clearly the intention of the Directorate is not benevolent.**

Our industry is familiar with the role and powers of the Principal Inspector and the subordinate departmental inspectors armed with possible Section 54s and 55s. Beware that surface mines will soon experience a new breed of Environmental Management Inspectors (EMI) – Green, Blue and Brown Scorpions responsible for conservation and bio-diversity; marine and water; and pollution; EIAs and waste respectively; and from the DMR's Environmental Management Resource Inspectors (EMRIs) – to exploit an already-used quote: persons 'you do not want to see at your operation'.

### Managing your risk

Realising the new potential threats to you and your business brought about by the increase in legislation and policing thereof, what options are open to you and your business to identify, prioritise and manage these risks to acceptable levels?

Clearly an environmental risk management system is necessary. In this regard, there are a number of Environmental (Risk) Management Systems available. None of those currently available can match the Aspasa About Face Environmental Management Programme for operations engaged in surface mining in South Africa.

The Aspasa About Face Environmental Management Programme has been born and raised out of the needs of the South African industry identified by our predecessors as early as 1994, with the launch of a rudimentary About Face RSA programme. Since 1994, the programme has evolved. In 2000 it was aligned with the ISO 14 001:1996 EMS. From 2012, the system has been upgraded annually to keep pace with national, provincial and local authority environmental legal requirements and international and local best practice.

The Aspasa About Face 2017 Programme has been updated to conform with the latest ISO 14 001:2015 EMS framework and has been expanded to include a manual to facilitate

*Ten/Ten' is the environmental penalty applicable to individuals in their personal capacity if convicted in a court of law, to a fine not exceeding R10-million or to imprisonment for a period not exceeding 10 years, or to both such fine and imprisonment.*

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implementation. The Aspasa About Face 2017 audit programme tests performance against the latest standards and by year end, Aspasa will possibly be the first South African industry association to have audited all participating members against the ISO 14:001:2015 framework.

The Aspasa About Face Environmental Management System has adapted the ISO 14 001:2015 framework to the South African mining industry. It is a unique programme that, if fully implemented by Aspasa member operations, it will:

- provide a fail-proof mechanism to keep pace with dynamic environmental requirements;
- enable participating member operations to set their own goals within the context of the legal and organisational requirement;
- enable operations to identify and assess their individual (site specific) risks associated with their activities at their operations;
- enable top management to prioritise those risks according to legal requirements and environmental needs;
- enable management to train subordinate management and employees in their respective responsibilities;
- enable communication of environmental needs upwards, downwards and laterally within the operation/organisation;
- enable meaningful management reviews; and
- ensure continued (environmental) performance improvement.

In conclusion, the risks faced by the surface mining industry in South Africa are broad, varied and dynamic. However, so are the opportunities, including opportunities for impact minimisation (such as of water, waste and energy), product and cost optimisation, and opportunities to engage with and establish best practice within the industry, within South Africa and internationally, in environmental management and surface mining.

Your Environmental Management System is a tool to manage these risks and optimise these opportunities.

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#### ABOUT THE AUTHORS

Alan Cluett holds a B.Sc in Geology and Economics from the University of Natal and a B.Sc Honours in Mineral Economics from RAU. He has successfully completed courses in Environmental Management Systems, Environmental Law and Environmental Auditing through the University of the North West.

Alan is a Life Member of the Geological Society of South Africa; a Fellow of the Institute of Quarrying; and a professionally registered Natural Scientist – Pr.Sci.Nat – in the disciplines of Geological Scientist and Environmental Scientist.

He has 36 years of experience in the quarry and cement industry and has been the Aspasa About Face auditor since 2012. In 2000, he became the first recipient of the Institute of Quarrying's Caernarfon Award.

Alan is a director in Cluett Consulting (Pty) Ltd, along with his daughter Colleen.

Colleen Cluett holds a B.Sc Honours in Environmental Science and an M.Sc in Ecology from the University of the Witwatersrand. Her Honours Thesis was completed on an assessment on mine rehabilitation in the cement industry.

Colleen has successful completed courses in Environmental Management Systems and Environmental Law through the University of the North West. She worked for three years in the Kruger National Park for a Duke University Educational Programme before joining Alan to form Cluett Consulting.

Colleen has conducted more than 50 Aspasa About Face audits and numerous training sessions on environmental management and the About Face audit protocol across the country.

She is managing director of Cluett Consulting (Pty) Ltd.

