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The Environmental Department of the Chamber of Mines acts as the primary representative of the mining sector in environmental sustainability policy and regulatory initiatives.

This is achieved through the department's leadership in engagements in the development of position papers for policy formulation and implementation in the fields of mining, general environmental management, water resources management, waste management, air quality and sustainable development. The department reviews policy and legislative frameworks; and provides advisory services and guidance and strategic leadership in areas such as mine rehabilitation and closures, environmental management policy issues, and sustainable development.

In the period under review, the department participated in various initiatives dealing with environmental and sustainability issues of concern to the mining industry, including chemicals, biodiversity, climate change, air quality, water resources and waste management. It also provided expert and specialist input to many legislative and policy initiatives. The main vehicle for such interaction is the Chamber of Mines Environmental Policy Committee, comprised of the most senior environmental management grouping in the South African mining industry.

KEY DEVELOPMENTS IN 2017

National Environmental Management Act: Financial Provision Regulations

We continued to pursue engagements on policy initiatives pertaining to creating favourable policy and regulatory investment in the mining industry. Of critical significance was the number of engagements on National Environmental Management Act Financial Provision (NEMA FP) regulations with the Department of Environmental Affairs (DEA), initially including National Treasury, and the departments of Water and Sanitation and Mineral Resources. These engagements aimed to find common solutions to mining industry concerns about the regulations published in 2015.

Throughout the engagements, the Chamber sought intervention from the DEA on provisions of the regulations, which present dire negative implications for the mining industry. These key issues included *inter alia* the following:

- The proposed methodology suggesting unjustifiable escalation of FP with CP1+2%
- Lack of a mechanism for withdrawal of FP funds
- Financial provision for latent impact
- Restrictions on the use of trust fund regulation presenting misalignment with Section 37(A) of the Income Tax Act No 58 of 1962

Subsequent to the numerous engagements, including workshops with government on the draft regulations earlier in the year, the DEA published the draft revised regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations on 10 November 2017. The published revised draft regulations are considered by the Chamber of Mines to improve on the 2015 version in addressing some of the mining industry's challenges. Some of the positive changes include deletion of regulations relating to latent impact and inclusion of a definition of residual environmental impact, deletion of the Minister's powers to retain financial provision upon issuance of a closure certificate and to cede financial provision for closure, deletion of care and maintenance and restriction of the use of a trust fund as a vehicle for financial provision.

Notwithstanding these positive changes, there are still some critical concerns on the revised NEMA FP regulations which were highlighted in our submission in December 2017 requesting the DEA to urgently address prior to the finalisation of the revised regulations. Some of these issues include the proposed methodology for calculating financial provision in regulations 7(2) and appendix 2, restriction of the use of guarantee, and deferring excess financial provision against subsequent assessment. To date we await the publication of the revised regulations which will hopefully address these mining industry challenges.

ENVIRONMENT continued**Classification of mine residue deposits and stockpile as hazardous waste**

Over the past two years, we have engaged intensively with the DEA, highlighting the negative technical, legal and financial impacts of the classification of mine residue deposits and stockpile in terms of the National Environmental Management: Waste Act 59 of 2008.

In 2017, the DEA conceded to the substantive inputs made by the Chamber of Mines regarding the intricacies of mine residue deposits by proposing an amendment to the Waste Act through the National Environmental Management Laws Amendment Bill, 2015 (NEMLA 4) process as a long-term solution. The DEA has also published the regulations with a list of waste management activities for exclusion from the definition of waste. In order to achieve complete temporal relief, the promulgation of regulations is necessary to completely exclude all mine residue deposits from the Waste Act. Subsequently, the proposed regulations for management and planning of mine residue deposits were amended by the DEA to exclude norms and standards for hazardous waste and also to focus on a risk-based approach. Reference to mine residue deposits in the definition of waste has not yet been removed from the Waste Act.

In this regard, Parliament has to approve the proposed amendments, which include inter alia the amendment of the Waste Act through NEMLA 4, as a lasting solution for the mining industry.

The UNFCCC 23rd Conference of Parties – COP 23

We actively participated in stakeholder engagement prior to the 23rd Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP 23), arranged by government and aimed at providing a platform for discussion of South Africa's position and, most importantly, giving direction to negotiators in terms of the expected outcomes.

The Chamber of Mines participated in COP 23, which took place in Bonn, Germany, in November 2017, as part of a business delegation from South Africa. South African business together with the government also collaborated in hosting a side event throughout COP 23 to showcase some of the initiatives that they are undertaking in addressing climate change - a number of mining houses were also part of this.

Pertinently, COP 23 took place at the same time as some of the worst storms in years were experienced in parts of South Africa, causing enormous infrastructure destruction. And of course in Cape Town, there has been persistent drought throughout 2017 thereby adversely affecting business and industry operations in the area due to stringent water use restrictions.

Some of the developing countries within the UNFCCC had insisted that adaptation to climate change and the mechanisms to help developing countries to deal with natural disasters caused by global warming should be one of the focus areas for discussion at COP 23. The adaptation fund has now reached a total equivalent of US\$93.3 million dollars exceeding the 2017 target.

Another key development out of COP 23 was the launch of various initiatives discouraging investment in coal mining. Bloomberg committed US\$50 million to expand the shift away from coal. Another event was the launch of the Powering Past Coal Alliance, encouraging 27 countries and regions to accelerate clean growth and climate protection through the rapid phase-out of coal power. Significance progress was also made towards negotiations in developing the rule book for the Paris agreement.

Chemicals and Waste Economy Phakisa

The Chamber of Mines participated in the Chemicals and Waste Economy Phakisa convened by the DEA. The inclusion of mine residue deposits by the DEA, as part of the industrial bulk waste work stream, prompted the Chamber to attend the Phakisa. Participation by the Chamber of Mines led to the exclusion of mine residue deposits from the focus areas for waste stream under industry bulk waste as this material is viewed as a resource.

National Climate Change Response Policy

The Chamber continued to engage with the DEA about the range of policy proposals aimed at providing measures to mitigate the impact of climate change. Carbon tax is one of the response policies with an array of allowances, such as trade exposure, carbon budgets and the Z-factor, among others, to cushion the economic impact.

We have embarked on an initiative to determine greenhouse gas (GHG) intensity benchmarks to enable the gold and platinum sectors to develop subsector Z-factors for consideration by National Treasury. The Z-factors will be used by subsectors to claim discount allowances in various efforts to reduce respective GHG emissions.

The Chamber of Mines, through Business Unity South Africa (BUSA), is engaging with the DEA to finalise the technical guidelines for reporting GHG emissions through the South African National Atmospheric Emissions Inventory System. The DEA has also embarked on a project to determine GHG emissions projections for South Africa up to 2050 in terms of the following scenarios:

- Without measures (WOM) – no climate change mitigation actions for that period
- With existing mitigation measures (WEM) including policies
- With additional measures (WAM)

ENVIRONMENT continued

The DEA has also published the final regulations pertaining to pollution prevention plans and a notice declaring GHGs as priority air pollutants. The Chamber of Mines has been providing inputs on behalf of members. The GHG reporting regulations have not yet been finalised.

National water resource strategy 2

The Department of Water and Sanitation (DWS) consulted with business and the Chamber of Mines through BUSA to inform stakeholders of its initiative to review the strategy. A business and mining industry implementation plan status report of the National Water Resource Strategy 2 (NWRS2) was presented by government and discussed at the engagement with a view to obtaining inputs from business at large. The discussions were aimed at assisting in the development of the NWRS3 so that previous issues of concern presented by government and the Chamber of Mines could be captured appropriately during the review.

The department will inform stakeholders of further engagements in the review of the NWRS2.

POLICY AND LEGISLATIVE DEVELOPMENT

The Chamber, on behalf of the mining industry, continued to provide specialist input on environmental policy and legislative development through participation in a range of activities in which all stakeholders are engaged. Some of these activities are discussed here.

Climate Change Legal Framework

The DEA has embarked on a process to develop climate change-specific legislation. The Act aims to:

- Provide for a co-ordinated and integrated response to climate change by all spheres of government in accordance with the principles of co-operative governance
- Provide for effective management of inevitable climate change impacts by enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change with a view to building social, economic and environmental resilience and an adequate national adaptation response in the context of the global climate change response
- Make a fair contribution to the global effort to stabilise GHG concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a time frame that enables economic, social and environmental development to proceed in a sustainable manner

The mining industry has welcomed the development of this legislation because it clarifies the roles and responsibilities of municipalities in terms of the National Environmental Management: Air Quality Act No 39 of 2004, and the concurrent mandate of the provinces and the national department in terms of climate change. Most importantly, this legislation will provide the necessary and dedicated framework to manage all aspects of a climate change response, including measures contained in the National Climate Change Response White Paper, which requires legislation for implementation.



Sibanye-Stillwater – Driefontein



ENVIRONMENT continued**Chemicals Management Policy**

During the year under review, the DEA gave in to pressure from stakeholders for the development of legislation on chemicals management arguing that there are inadequate legislative measures in place to manage chemicals. The DEA contends that chemicals management is a cross-sectoral issue, administered by various government departments and institutions, thus there is no formalised overarching framework for chemicals management. The DEA has identified a need to develop a national policy aimed at reducing and eliminating chemical threats to the environment and human health. During the engagements, the DEA indicated that a major challenge in achieving a comprehensive approach to managing the impacts of chemicals lies in ensuring that there is co-ordination and harmony in activities and legislation. In responding to these challenges, a national Chemicals Management Policy is needed. To this end, the Chamber contributed to engagements by the DEA to discuss the policy proposal for chemicals management.

National Environmental Management Laws Amendment Bill (NEMLA 4)

In March 2017, Cabinet approved the publication, for comment, of the National Environmental Management Laws Amendment Bill 2017 (NEMLA Bill 2017), which intends to amend the following pieces of environmental legislation:

- National Environmental Management Act No 107 of 1998
- National Environmental Management: Protected Areas Act No 57 of 2003
- National Environmental Management: Biodiversity Act No 10 of 2004
- National Environmental Management: Air Quality Act No 39 of 2004
- National Environmental Management: Integrated Coastal Management Act No 24 of 2008
- National Environmental Management: Waste Act No 59 of 2008
- National Environmental Management Amendment Act No 62 of 2008

Of strategic importance for the mining industry is the amendment of the Waste Act to exclude mine residue deposits and stockpiles from the definition of waste under the NEM: Waste Act. This provides long-term certainty to the mining industry as these materials are a resource and thus it is inappropriate to regulate them as waste.

To this end, the Chamber of Mines has initiated a process to compile comments for submission when public consultations on the Bill resume.

National Water Act

The DWS has published regulations regarding procedural requirements for water use licence applications and appeals, as contemplated in Section 41 of the National Water Act No 36 of 1998. The Chamber of Mines submitted comments following engagement with the DWS at a meeting prior to the finalisation of the regulations.

Among other National Water Act developments, the Chamber represented the mining industry position in the following initiatives:

- The development of South Africa's National Water and Sanitation Master Plan intended to assist the DWS with investment planning for the development of water resources, and the delivery of water and sanitation services. The plan is intended to provide an integrated response to the United Nations Sustainable Development Goals, National Development Goals, National Water Resource Strategy and Medium Term Expenditure Framework.
- The Mine Water Management Policy Position published by the DWS in terms of Chapter 2 of the National Water Act provides for the development of strategies in order to facilitate proper management of resources. The purpose of the policy document is to present the position of the DWS on mine water management, including acid mine drainage (AMD). In addition, to provide measures on protection of water resources from prospective, operational and historic mine activities with negative quality impacts.
- The DWS's initiative aimed at the development of an Integrated Water Quality Management Plan for the Olifants River system. The plan is a sub-strategy that will fit in the catchment management strategy for the Olifants water management area as a layer of the National Water Quality Policy being developed to focus on water quality.

Draft National Water Pricing Strategy

Chapter 5 of the National Water Act provides for the development of a Raw Water Pricing Strategy for water-use charges. The pricing strategy applies only to the use of raw (untreated) water and to the setting of tariffs by the DWS and water management institutions to be established in terms of the National Water Act. The raw water tariff includes charges for water resource development, water resource management and waste discharge, as well as the water research levy. The water resource management charges are intended to fund water resource management activities, including:

- Monitoring and assessing water resource availability and use
- Water use allocation

ENVIRONMENT continued

- Management of flood, drought and water abstraction
- Management of water quality and water resource protection
- Water conservation and demand management
- Institutional development and public participation
- Planning and implementation of catchment management strategies

We participated in a national consultation workshop for raw water use charges in the financial year 2018/19, hosted by the DWS, and contributed to discussions with written submissions to the relevant section of the DWS.

We discouraged the inclusion of AMD cost in the revised water pricing strategy on the basis of the recommendation of the Inter-Ministerial Committee report for the DWS on the feasibility of an AMD levy. The Chamber of Mines was also involved in the development of the draft Integrated Water Quality Management Policy currently with Parliament.

Draft Preservation and Development of Agricultural Land Framework Bill, 2016

The National Economic Development and Labour Council (Nedlac) deliberations on the draft Bill published by the Department of Agriculture, Forestry and Fisheries (DAFF) continued throughout 2017. The Chamber has been negotiating as part of a business contingent co-ordinated through BUSA with the Agricultural Business Chamber and Agri South Africa.

Nedlac has not made much progress in resolving some of the following mining industry concerns:

- Authorisations to use agricultural land for mining and other activities with relief of the regulatory burden faced by the mining
- Delineation of high-value agricultural land to restrict activities such as mining

Implementation of the National Environmental Management: Air Quality Act

The DEA embarked on the legislative process to review the National Air Quality Framework (NAQF) in compliance with the Act that provides for the review of the NAQF every five years. The draft NAQF was published for comment by stakeholders and provincial consultation workshops were hosted by the DEA. Air quality management is the constitutional mandate of the local authorities. Due to administrative complexities and the various roles and responsibilities of the three spheres of government, it became necessary to also provide for implementation of the Air Quality Act throughout national, province and local authorities where necessary. The NAQF provides an administrative guideline to authorities on the implementation of the Act as well as norms and standards regarding administration fees for the issuance of atmospheric emission licences, ambient air and emission standards

and implementation of the Act, among others. One of the key developments of the NAQF is to elevate mining-related activities, including licensing, to the national department.

Water conservation and water demand management

Water is scarce in South Africa while demand continues to increase in the mining, agricultural, power generation, industrial, commercial and domestic sectors. With limited water resources, water conservation and water demand management (WC/WDM) initiatives and measures are national imperatives.

WC/WDM is fundamental in promoting efficient, effective and sustainable use of water, and is consistent with the National Water Act and the National Water Resources Strategy. We continued to provide both technical and financial support for the achievement of deliverables for the collaborative project with the DWS to develop commodity-based national water use efficiency benchmarks, as well as new reporting protocols to monitor mine performance as it relates to water efficiency. To this end, the Water Use Efficiency Benchmarks Report and Guideline for Implementation of WC/WDM Plans has been published.

Mining and biodiversity

The Chamber continued to provide leadership in the biodiversity sector through collaboration with stakeholders in the development of measures to mainstream biodiversity under the auspices of the South African Mining Biodiversity Forum (SAMBF). Mining companies, government departments, conservation organisations, independent academics, organised labour and financial institutions participate in the forum, which provides an opportunity for cross-sectoral interaction and co-operation to improve biodiversity conservation, management and performance in the South African mining industry.

The Chamber of Mines also engaged with the annual National Biodiversity Planning Forum, hosted under the leadership of the South African National Biodiversity Institute (SANBI), which provides an opportunity for individuals, agencies and departments involved in spatial biodiversity planning to share and synthesize valuable lessons learned across South Africa.

Environment-related taxes and charges

The DEA, National Treasury and the Organisation for Economic Co-operation and Development hosted a workshop on environment-related taxes and other fiscal instruments. The objective of this workshop was to facilitate dialogue about inter alia improving environmental performance while raising revenues. Discussions included the following:

- National Treasury asserted that environmental taxes are extremely important for governments facing challenges, including economic pressures that led to the need for new tax

ENVIRONMENT continued

revenue streams. Although earmarking a particular tax revenue stream is not in line with sound fiscal practices, it is important to recycle revenue efficiently, including mechanisms such as tax shifting and tax incentives, among others.

- The plastic bag levy has led to a noticeable decrease in litter, although not as much as expected. It has also not influenced consumer behaviour significantly, and has not addressed waste reduction.
- Developments in pursuit of carbon tax highlight its objective as part of South Africa's mission to lower GHG emissions and transition to a low carbon economy.

Mine water co-ordination body

The Chamber played a pivotal role in the formation of the Mine Water Co-ordinating Body (MWCB) and, most importantly, in facilitating enrolment and participation by its members. The Chamber also serves as a key member of the MWCB executive committee, representing the interests of its members. The MWCB is a neutral platform for public, private and civil society sectors to identify and implement joint solutions to improve water quality and address mine closure, starting in the Upper Olifants Catchment.

The MWCB will also provide governance and develop project processes, work plans and time frames for the joint projects and initiatives. This will include a structure to govern all stakeholder engagement and the establishment of a small implementing team to ensure that projects are implemented within the required scope, time frames and budget.



CAPTION
Northam – Booyensdal

Water Institute of Southern Africa Mine Water Division

During 2017, the Chamber continued to be a standing member of the executive management committee of the Water Institute of Southern Africa's Mine Water Division. This division provides a multi-disciplinary forum for the advancement of cost-effective and environmentally acceptable water management in the South African mining and metallurgical industry. Through active involvement in this initiative, the Chamber managed to exchange information on proactive mine water management approaches, identifying information, technology, research, development and implementation needs for the benefit of its members.

International Council on Mining and Metals

As a member of the International Council on Mining and Metals (ICMM), the Chamber continued to apply ICMM principles and protocol to strengthen social and environmental performance in the mining industry. The Chamber has been participating in ICMM activities aimed at the implementation of the overarching ICMM strategy for 2016 to 2018, which focuses on collaborative action towards water stewardship.

Bojanala Water Forum

During the year under review, the Chamber was instrumental in the co-ordination of activities and projects related to water and sanitation in response to commitments presented by the Bojanala Water Forum, as mandated by the Portfolio Committee on Water and Sanitation. The forum comprises mining houses, water boards, the South African Local Government Association, the Department of Co-operative Governance and Traditional Affairs and municipal representatives. It has been formed to implement partnerships between mining houses and municipalities on issues related to water and sanitation.





CASE STUDY

DETERMINING PGM AND GOLD MINING GREENHOUSE GAS INTENSITY BENCHMARK

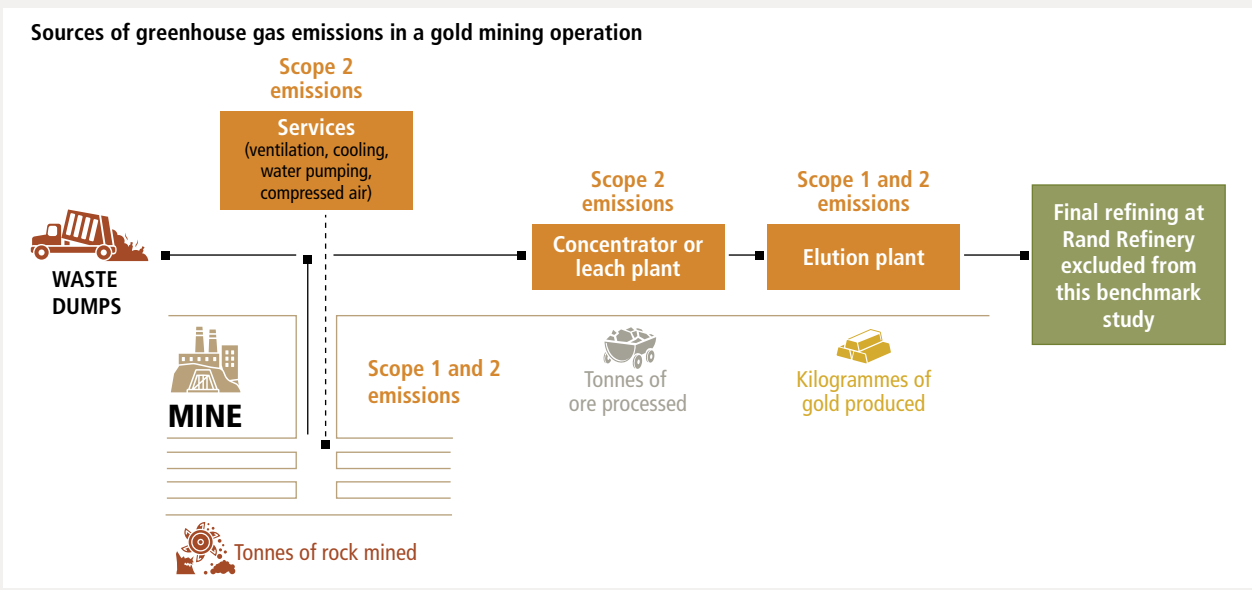
National Treasury is developing carbon tax legislation in an effort to introduce and implement measures that will mitigate the impacts of climate change.

The draft Carbon Tax Bill provides for a range of tax-free allowances in its design and these are subject to review after five years. The tax-free allowances provide tax relief during Phase 1 of the implementation of the Act to ensure a smooth transition to a low carbon economy and to reward companies that have taken voluntary actions to reduce their GHG emissions. The draft Carbon Tax Bill provides for, among other instruments, the Z-factor, which encourages firms to reduce their respective carbon intensities. It will thus provide companies with a tax-free allowance of up to 5% if its emissions intensity is better than the sector or subsector benchmark. This will be accommodated by adjusting the basic tax-free threshold of 60% by a factor (Z), calculated with reference to either the agreed benchmark emissions intensity (including Scope 1 and Scope 2 emissions) for the sector or the emissions intensity (including Scope 1 and Scope 2 emissions) with reference to a specific date. Essentially, firms below the benchmark emissions intensity (including Scope 1 and Scope 2 emissions) will be rewarded through this allowance.

In response to this, the Chamber of Mines, on behalf of the South African mining industry, is undertaking a study to determine the GHG intensity benchmark and, consequently, to develop the Z-factor for mining subsectors. A phased approach was adopted with the first phase focusing on the platinum group metal (PGM) and gold mining subsectors with a view to addressing other commodities when approval is granted by National Treasury.

The Chamber of Mines has engaged with National Treasury about the GHG intensity benchmark. Data from various mines was used to determine a consolidated GHG intensity benchmark, noting various conditions, such as mine depths. The Chamber has since revised the draft proposals, which have been resubmitted to National Treasury. We envisage that National Treasury will commence with the expert review on the draft reports submitted and provide feedback to the relevant subsectors.

The GHG emission source data in gold mining and a PGM operation collected from mining companies was used to determine the respective draft intensity benchmarks illustrated in the diagrams below.



ENVIRONMENT continued

CASE STUDY

Sources of greenhouse gas emissions in a PGM mining operation

