

ENVIRONMENTAL AUTHORISATIONS AND MINING ORGANISATIONS

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DECLARATION

I, the undersigned, hereby declare that the work contained in this dissertation is my original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date:

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To our King and Saviour; the Almighty, who has and who will always make the impossible possible;

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ABBREVIATIONS

APPA	Atmospheric Pollution Prevention Act 45 of 1965
ECA	Environment Conservation Act 73 of 1989
EMS	Environmental Management System
FFFA	Fertilisers, Farm Feeds, Agriculture Remedies and Stock Remedies Act 36 of 1947
IER	Initial Environmental Review
ISO	International Organisation for Standardization
MPRDA	Mineral and Petroleum Resources Development Act 28 of 2002
NEMA	National Environmental Management Act 107 of 1998
NWA	National Water Act 36 of 1998

Abstract

Mining is essential to the human well-being in many aspects. Mining activities, however, contribute significantly to pollution and other environmental impacts in South Africa. Recently much more stringent environmental legislation has been developed in South Africa due to increased public awareness and environmental disasters caused by mining activities. Authorisations constitute one of the main “command and control” instruments that can be used to influence and direct the behaviour of individuals and organisations to achieve sound environmental protection ultimately. The problem is that in the ever-changing maze of South African environmental legislation, it is often difficult for individuals and organisations to identify, obtain and maintain environmental authorisations. This article provides a legislative framework for the mining sector, explores the purpose and importance of environmental authorisations, gives an overview of the underlying relationship between environmental authorisations, risk assessment and environmental management systems before proposing a generic procedure for identifying, obtaining and maintaining environmental authorisations.

Key Words

Mining, environment, environmental performance, legal compliance, liability, authorisations, legislation, Environmental Management Systems, ISO 14001.

Uittreksel

Mynbou is in talle opsigte noodsaaklik vir die menslike welvaart. Mynbou aktiwiteite dra egter by tot aansienlike besoedeling en ander omgewingsimpakte in Suid-Afrika. Daar is onlangs in Suid-Afrika strenger omgewingswetgewing ontwikkel as gevolg van publieke bewuswording en omgewingsrampe wat veroorsaak was deur mynbou aktiwiteite. Magtigings is een van die hoof “beveel en beheer” instrumente wat gebruik kan word om die gedrag van individue en organisasies te beïnvloed en te rig om sodoende uiteindelik omgewingsbewaring te verseker. Die probleem is egter dat individue en organisasies sukkel om die relevante omgewingsmagtigings te identifiseer, te verkry en te behou as gevolg van voortdurende veranderende Suid-Afrikaanse wetgewing. Hierdie artikel verskaf 'n raamwerk van relevante omgewingswetgewing vir die mynbou sektor, gee 'n oorsig van die onderliggende verhouding tussen omgewingsmagtigings, risiko-analise en omgewingsbestuurstelsels ten einde 'n generiese prosedure voor te stel vir die identifisering, verkryging en instandhouding van omgewingsmagtigings.

Trefwoorde

Mynbou, omgewing, omgewings bestuursprestasie, wetlike insiklikheid, aanspreeklikheid, magtigings, wetgewing, omgewingsbestuur stelsels, ISO 14001.

1. Introduction

The purpose of mining is the extraction and processing of energy and mineral resources. Use of these resources is fundamental to human well-being as they are essential to virtually every sector of the economy, they form the basis for the human-built environment and provide desired services.¹ However, the mining industry has been a focus of criticism in the past. It has been associated with detrimental environmental impacts which are visible and intense and too often the people impacted by mining have received few tangible benefits.² In South Africa, increased public awareness of the need to protect the environment coupled with environmental disasters such as the Merriespruit slime dam disaster in February 1994, has led to the development of more onerous environmental legal requirements for mining activities. This new legal requirements aim to prevent environmental mishaps proactively where local communities may suffer environmental, economic and social disadvantages. Although mines have to comply with the environmental provisions of the new Minerals and Petroleum Resources Development Act 28 of 2002, they do not always comply with other relevant environmental legislation and the relevant environmental authorisations contained in such legislation. Environmental authorisations³ may be amongst others, permits, licences and certificates.⁴ Operating without these authorisations may pose a significant risk to any organisation and should, therefore, be managed accordingly.

There are various reasons why organisations are not legally compliant.⁵ Firstly, organisations are not informed of all the legal requirements that they have to comply with. This may be due to organisations not having enough experience available in the existing human resources to identify the relevant legislation and environmental authorisations. Secondly, legal requirements are forever changing and if an organisation does not have effective procedures in place to deal with the changing

¹ See J Shields and S Solar 'Challenges to sustainable development in the mining sector' *Mining and sustainable development II* (2000) at 16.

² B Carbon 'Sustainable development and the evolving agenda for environmental protection in the mining industry' *Mining and sustainable development II* (2000) at 32.

³ See 2.3 for a definition of environmental authorisations.

⁴ See 2 for a detailed discussion of environmental authorisations.

⁵ This statement is supported by evidence obtained from a number of legal compliance and environmental system audits conducted at various companies. Due to the sensitive nature of such audits names and companies not be used in this article.

legislative requirements, the organisation will not be able to keep track of changing and new environmental authorisations. Thirdly, the timely manner in which competent authorities⁶ warrant environmental authorisations plays an important role. Long delays caused by incompetent authorities often hamper the development of projects and, therefore, organisations tend to deliberately neglect these crucial legislative requirements.⁷ Lastly, not all organisations want to spend or are able to spend the resources, time and money to go through the whole process of:

- identifying the relevant legislation and necessary authorisations in environmental law;
- identifying the process for applying for the required authorisations;
- identifying and contacting the competent authority; and
- maintaining authorisations by complying to specified conditions.

It is, however, crucial for mining organisations to identify all authorisations in environmental legislation that are relevant to the specific organisation's needs in order to obtain and maintain their licence to operate. By doing so a mining organisation will manage their legal risks accordingly. In most instances, however, mines do not have a reliable procedure to identify, obtain and to maintain these authorisations found in the maze of South African national legislation⁸, provincial ordinances and also in municipal by-laws.⁹

A method of dealing with all the relevant environmental issues and legislation pertaining to these issues is to implement an environmental management system¹⁰ such as ISO 14001.¹¹ ISO 14001 is a specification of the elements of an EMS that should be in place for an enterprise to be able to manage environmental matters effectively. However, ISO standards are voluntary and it may or may not be

⁶ The issue of what a competent authority is may be subject to a lengthy debate. For purpose of this article a competent authority is deemed to be a governmental body which has the power, mandate, capability, resources and willingness to govern and administer certain functions such as issuing environmental authorisations.

⁷ See E Snyman (ed) 'Report: An Integrated Environmental Management System for the North West Province' Final Report: Phase III *Unpublished* (2004) 483p.

⁸ Parliamentary legislation has the same meaning as national legislation.

⁹ See also 2 for the legislative framework for the mining sector.

¹⁰ Hereafter referred to as EMS.

¹¹ ISO 14001:1996 'Environmental management systems – Specification with guidance for use' at 1-14.

advisable for an enterprise to seek ISO 14001 registration or follow the guidance provided by the standards in the series.¹²

The purpose of this article is not to discuss all the legislation applicable to mines in detail, but to propose a procedure for mining organisations to identify, obtain and maintain environmental authorisations found in environmental legislation. The aims of this article are to:¹³

- provide a legislative framework for the mining sector;
- indicate the underlying relationship between environmental authorisations, environmental risk management and environmental management systems;
- discuss the importance of an environmental management system and why a management system could be used as a basis for ensuring legal compliance; and
- propose a procedure for identifying, obtaining and maintaining environmental authorisations.

In this article the legislative framework for the mining sector will be discussed to provide a “map” to the most important legislation that may contain environmental authorisations. Thereafter, a comprehensive definition will be given of environmental authorisations and the purpose of environmental authorisations will be discussed. This will be followed by the explanation of the underlying relationship between environmental authorisations, environmental management systems and risk management before discussing ISO 14001 and authorisations in more detail. This article will then provide a proposed procedure for identifying, obtaining and maintaining environmental authorisations before reaching a conclusion.

¹² Refer to chapter 5 for a detailed discussion of ISO 14001 and environmental legislation.

¹³ The study was concluded by the end of November 2004 and will, therefore, not include or make reference to any new environmental legislation after the said date.

2. Environmental legislative framework for the mining sector

2.1 Hierarchy of environmental framework legislation

It is difficult to define environmental legislation and the scope¹⁴ of environmental law, as it is a conglomerate of rules taken from different branches of the law that all deal with various aspects of the environment. However, the conventional way of identifying environmental law is by means of a 'subject-matter' approach.¹⁵ In essence, this view posits that environmental law consists of all legal principles which 'have in common not so much their special character, but the subject they regulate'. This subject is, in short, environmental management.¹⁶

Because of the fragmented nature of environmental legislation, it has the tendency to confuse not only lay persons, managers and ground level personnel but also experienced environmental lawyers. An understanding of the hierarchy and network of legislation is, therefore, necessary. The highest authority of legislation is the Constitution of the Republic of South Africa Act 108 of 1996,¹⁷ then national and provincial legislation and on the lowest level local by-laws issued by local authorities.

Since 1996, various environmental framework elements have been incorporated in legislation. Section 24 of the Constitution forms the main framework within which other environmental legislation has to be interpreted. The National Environmental Management Act 108 of 1998,¹⁸ together with the Environmental Conservation Act

¹⁴ See J Glazewski 'Environmental Law in South Africa' (2000) at 11. Glazewski argues that the ambit of environmental law is extremely wide, and its scope imprecise and, therefore, some authorities may regard the subject as simply a collection of the various relevant branches of the law.

¹⁵ Kidd 'Environmental Law: A South African Guide' (1997) 4-5 quoting V Cowen 'Toward Distinctive Principles of South African Environmental Law: Some Jurisdictional Perspectives and a Role for Legislation' (1989) *THRHR* at 52.

¹⁶ M Kidd op cit n14 at 4-5. In his analysis of the abovementioned statement, Kidd calls for the clarification of two distinct issues. Firstly, the determination of what subject matter qualifies as falling under the general topic of environmental management and secondly, the clarification of to what degree legal principles must relate to environmental management to qualify as environmental law. Refer to Kidd op cit n14 at 4-5 for a detailed discussion of this issue.

¹⁷ Hereafter referred to as the Constitution.

¹⁸ Hereafter referred to as the NEMA.

73 of 1989¹⁹ may be regarded as environmental framework legislation, while sectoral-specific legislation such as the *National Water Act* 36²⁰ of 1998 and the *Minerals and Petroleum Resources Development Act* 28 of 2002²¹ contain some elements of framework legislation.²²

The hierarchy of the legislative framework within which the mining sector operates is illustrated in Figure 1 below:

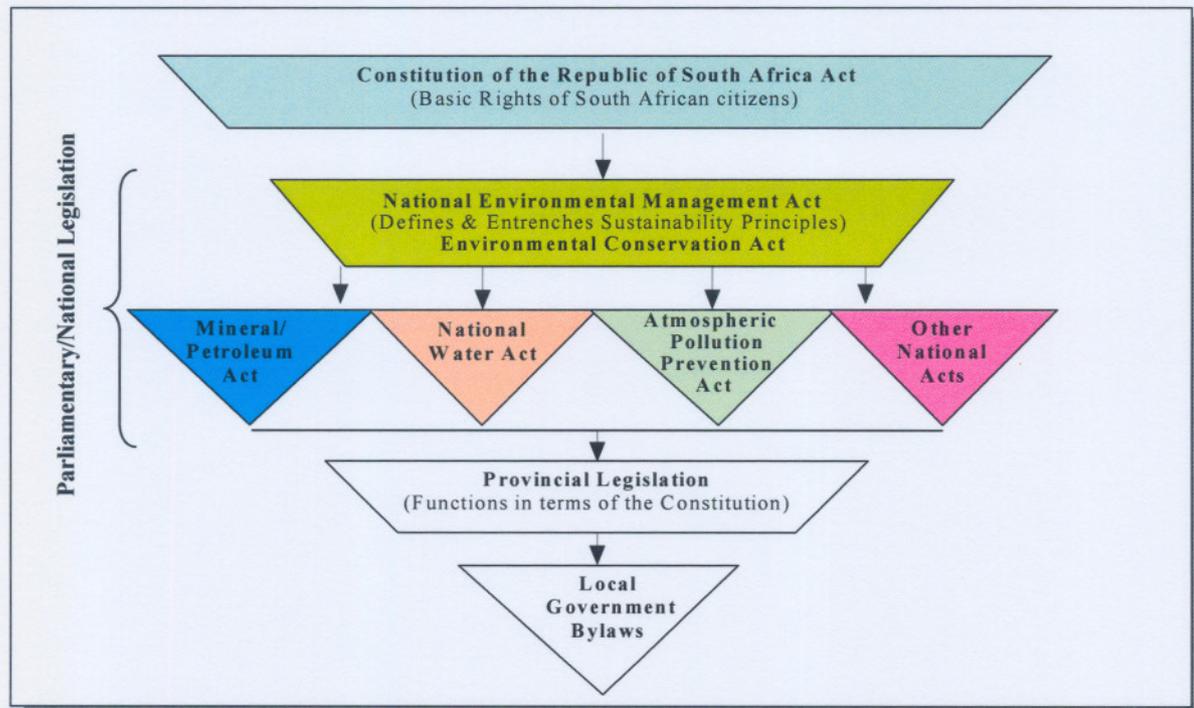


Figure 1. Legislative Framework for the Mining Sector²³

¹⁹ Hereafter referred to as the ECA.

²⁰ Hereafter referred to as the NWA.

²¹ Hereafter referred to as the MPRDA.

²² J Nel and W du Plessis 'An evaluation of NEMA based on a generic framework for environmental framework legislation' (2001) 8 *SAJELP* at 17-19.

²³ Adapted from the 'Legal Register for Water Quality Management in support of an ISO 14001-based Management System' *DWAF* (2003) at 18. See Table 1 for a more comprehensive list of environmental laws which has may be applicable to mining organisations.

2.2 Relevant environmental legislation

There are currently in excess of one hundred laws directly or indirectly relevant to the environment. The list of laws in Table 1 below does not include all the applicable laws but will be limited to laws which principally have an effect on pollution caused by mining organisations.

Table 1. List of principal environmental legislation which may contain environmental authorisations.²⁴

Category	Law
General	National Nuclear Regulator Act 47 of 1999
	Nuclear Energy Act 46 of 1999
	National Environmental Management Act 107 of 1998
	National Veld and Forest Fire Act 101 of 1998
	South African National Roads Agency Limited and National Roads Act 7 of 1998
	National Road Traffic Act 93 of 1996
	Occupational Health and Safety Act 85 of 1993
	Environmental Conservation Act 73 of 1989
	Conservation of Agricultural Resources Act 43 of 1983.
	Fertilizers, Farm Feeds and Agricultural Remedies Act 36 of 1947
	Human Tissue Act 65 of 1983
	National Building Regulations and Building Standards Act 103 of 1977
	Health Act 63 of 1977
Explosives Act 26 of 1956	
Air Pollution	Occupational Health and Safety Act 85 of 1993
	Health Act 63 of 1977
	Atmospheric Pollution Prevention Act 45 of 1965

²⁴ See also I Sampson 'Introduction to a Legal Framework to Pollution Management in South Africa' *Deloitte & Touche* (2001) at 137-164 and Glazewski op cit n13 at 193-781.

Category	Law
	Regulations in term of Section 21 of the Environment Conservation Act of 1989 <ul style="list-style-type: none"> • Identification of Activities Which May Have Detrimental Effect on the Environment (Scheduled Process Activities) (GNR1182, 1183 and 1184, GG18261 of 5 September 1997)²⁵
<i>Inland Water Pollution</i>	National Water Act 36 of 1998
	Environment Conservation Act 73 of 1989
	Water Services Act 108 of 1997
	Minerals and Petroleum Resources Development Act 28 of 2002
	Conservation of Agricultural Resources Act 43 of 1983.
	Health Act 63 of 1977
<i>Marine Pollution</i>	Lake Areas Development Act 39 of 1975
	Marine Living Resources Act 18 of 1998
	Maritime Zones Act 15 of 1994
	Nuclear Energy Act 131 of 1993
	Marine Pollution (Intervention) Act 64 of 1987
	Marine Pollution (Prevention of Pollution) Act 2 of 1986
	Marine Pollution (Control and Civil Liability) Act 6 of 1981
	Marine Traffic Act 2 of 1981
	Dumping at Sea Control Act 73 of 1980
	National Parks Act 57 of 1976
	Minerals and Petroleum Resources Development Act 28 of 2002
	Sea-Shore Act 21 of 1935
	Merchant Shipping Act 57 of 1951
National Water Act 36 of 1998	
<i>Waste Management</i>	National Water Act 36 of 1998
	Nuclear Energy Act 131 of 1993
	Occupational Health and Safety Act 85 of 1993
	Minerals and Petroleum Resources Development Act 28 of 2002
	Environment Conservation Act 73 of 1989
	Legal Succession to South African Transport Services Act 9 of 1989
	Electricity Act 41 of 1987

²⁵ To be repealed and replaced by the NEMA Regulations. See proposed regulations under section 24(5) of the NEMA.

Category	Law
	Conservation of Agricultural Resources Act 43 of 1983
	Health Act 63 of 1977
	Hazardous Substances Act 15 of 1973
	National Roads Act 54 of 1971
	Atmospheric Pollution Prevention Act 45 of 1965
	Advertising on Roads and Ribbons Development Act 21 of 1940
	Occupational Health and Safety Act 85 of 1993. GN R236 (GG 23175 of 28/02/2002): Lead Regulations
	Occupational Health and Safety Act 85 of 1993. GN R155 (GG23108 of 10/2/2002): Asbestos Regulations
<i>Hazardous and Toxic Chemicals</i>	Conservation of Agricultural Resources Act 43 of 1983
	Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947
	Food Stuffs, Cosmetics and Disinfectant Act 54 of 1972
	Hazardous Substances Act 15 of 1973
	Health Act 63 of 1977
<i>Land Use and Planning</i>	Development Facilitation Act 67 of 1995
	Environment Conservation Act 73 of 1989
	Nuclear Energy Act 131 of 1993
	Physical Planning Act 125 of 1991
	Minerals and Petroleum Resources Development Act 28 of 2002
	Conservation of Agricultural Resources Act 72 of 1989
	National Parks Act 57 of 1976
	Lake Areas Development Act 39 of 1975
	Mountain Catchment Areas Act 63 of 1970
	Subdivision of Agricultural Land Act 70 of 1970
	Physical Planning Act 88 of 1967
Atmospheric Pollution Prevention Act 45 of 1965	
<i>Nature Conservation and Animal Protection Legislation</i>	National Environment Management: Biodiversity Act 10 of 2004
	National Environment Management: Protected Areas Act 57 of 2003
	Marine Living Resources Act of 1998
	National Forests Act 84 of 1998
	Development Facilitation Act 67 of 1995
	Game Theft Act 105 of 1991
	Environment Conservation Act 73 of 1989
	Forests Act 122 of 1984

Category	Act
	National Parks Act 57 of 1976
	Lake Areas Development Act 39 of 1975
<i>Cultural and Heritage Environment Conservation</i>	National Heritage Resources Act 25 of 1999
	National Heritage Council Act 11 of 1999
	Cultural Affairs Act (House of Assembly) 65 of 1989
	National Monuments Act 28 of 1969

Most of the acts mentioned in Table 1 and in Figure 1, as well as provincial and local environmental legislation make provision for the issuing of authorisations such as permits, registration certificates, directives and licences. It is, therefore, imperative that mining organisations should take notice of these acts and understand the hierarchy and the network of environmental legislation in order to identify, obtain and maintain applicable environmental authorisations found in national, provincial and local legislation.²⁶ In the following section the definition of environmental authorisations will be discussed.

2.3 Definition of environmental authorisations

No comprehensive definition of *environmental authorisations* could be found during the research of this article. The purpose of this section of the article is, therefore, to provide an appropriate, inclusive and understandable definition of the documents that may be given to an applicant by a competent authority.

Reference made to permits, registration certificates, licences and permissions may lead to confusion and misunderstanding as to the nature of the document and what it entails. Table 1 gives definitions and some examples of the types of environmental authorisations found in South African environmental legislation.²⁷

²⁶ It is not the purpose of this article to discuss all applicable environmental legislation and the authorisations found in environmental legislation in detail. For an in depth explanation of environmental legislation and of individual environmental authorisations see M Mabiletsa and W du Plessis 'The Impact of Environmental Legislation on Mining in South Africa' (2001) 8 SAJELP at 185-213, I Sampson 'Introduction to a Legal Framework to Pollution Management in South Africa' Deloitte & Touche (2001) at 137-164 and Glazewski op cit n13 at 193-781.

²⁷ Refer to The Philological Society *The Oxford English Dictionary Being a Corrected Re-Issue with an Introduction, Supplement, and Bibliography of New English Dictionary on Historical Principles*

Table 2. The types of environmental authorisations in environmental legislation

<p>Authorisation²⁸</p>	<p>A document etc., giving permission or power to somebody to do something.</p>	<ul style="list-style-type: none"> • Written authorisation to undertake an identified listed activity in terms of section 22 of the ECA. • Identification of activities which may not commence without prior authorisation in terms of section 24 of the NEMA. • General authorisations to use water in terms of section 39 of the National Water Act 36 of 1998.
<p>Permit²⁹</p>	<p>A written order giving permission to do something</p>	<ul style="list-style-type: none"> • Permit for establishing, providing or operating a waste disposal site in terms of section 20 of the ECA. • Acquisition, use or disposal of certain fertilizers, farm feeds and stock remedies in terms of section 7 of the Fertilizers, Farm Feeds Agricultural Remedies and Stock Remedies Act No 36 of 1947.³⁰ • No acquisition, supply, storage, transportation and exportation of explosives without a permit in terms of sections 6, 7, 8, 30 of the Explosives Act 26 of 1956.

Oxford at Clarendon Press Volume I-VIII 1979 for the definitions of the environmental authorisations in Table 1.

²⁸ Philological Society op cit n27 Volume I at 572.

²⁹ Philological Society op cit n27 Volume II at 711.

³⁰ Hereafter referred to as the FFFA.

Term	Definition	Examples
Licence ³¹	A formal, usually a printed or written permission from a constituted authority, to do something, for example to carry on a trade.	<ul style="list-style-type: none"> In general a water use must be licensed unless it is listed in Schedule 1, it is an existing lawful use, is permissible under a general authorisation, or if a responsible authority waives the need for a license as required in chapter 4, section 21 of the NWA.
Certificate ³²	A document certifying the status or acquirements of the bearer, or his fulfilment of conditions which authorises him to act or practise in a specified way: hence, often or equal to a licence.	<ul style="list-style-type: none"> Certificate of registration of pest control officers in terms of section 3 of the FFFA. No person may carry on a scheduled process in or on any premises unless that person is a holder of a provisional or current registration certificate as required in section 9 of the Atmospheric Pollution Prevention Act 45 of 1965.³³
Registration ³⁴	The act of registering or recording ... an entry made in a register.	<ul style="list-style-type: none"> A responsible authority may, subject to any regulation made under section 26(1)(c) of the NWA, require the registration of an existing lawful water use.
Permission ³⁵	The action of allowing or giving leave; allowance; liberty or licence granted to do something.	<ul style="list-style-type: none"> Disposal of Group IV substances requires permission (written authority) as specified in section 3A of the Hazardous

³¹ Philological Society op cit n27 Volume VI at 243.

³² Philological Society op cit n27 Volume II at 236.

³³ Hereafter referred to as the APPA. Also note that this Act will eventually be repealed by the National Environmental Management: Air Quality Bill of 2003.

³⁴ Philological Society op cit n27 Volume VIII at 374.

³⁵ Philological Society op cit n27 Volume II at 711.

		Substances Act 15 of 1973.
Exemption ³⁶	The action of exempting or the state of being exempted from a liability, obligation, penalty, law or authority.	<ul style="list-style-type: none"> • Exemption from application to any provisions issued in terms of the ECA as specified in section 28A.

Each of the documents mentioned in Table 1 is a written document that may be issued to an applicant by a competent authority to grant the applicant permission to do something or in the case of an exemption, not to do something. All of these documents are, therefore, regulating documents controlling the actions of a legal person for example, a mining organisation or one of its business units. For the purpose of the study an *environmental authorisation* will be defined as being a: *written order, document or certificate that may be issued by a competent authority (government department, minister, authorised official) to an applicant to grant the applicant permission to perform certain acts or activities that may have an impact on the environment.*

2.4 Purpose of environmental authorisations

Authorisations are the most widely used technique by government to prevent environmental harm and constitute one of the main *command and control* instruments to influence and direct the undertakings and behaviour of individuals and companies to achieve sound environmental protection ultimately.³⁷ It is also the best example of the most often utilised *command and control* tool in Integrated Environmental Management.³⁸ In this context, authorisations are an essential part of regulatory environmental law as it establishes substantive requirements which require observance by polluting actors.³⁹ Environmental authorisations are also documents that verify the legality of operations and demand verification of compliance to very specific environmental performance requirements such as water

³⁶ Philological Society op cit n27 Volume VIII at 400.

³⁷ See A Kiss and D Shelton 'Manual of European Environmental Law' Cambridge (1997) at 119.

³⁸ See Snyman op cit n7 at 419-420.

³⁹ G Winter 'European Environmental Law – A Comparative Perspective' Dartmouth (1996) at 53-62. See also Snyman op cit n7 at 419.

parameters.⁴⁰ The purpose of environmental authorisations is, therefore, to guarantee compliance with all laws and regulations and to ensure that section 24 of the Constitution and the principles in the NEMA take effect. Apart from the above-mentioned, environmental authorisations are also an important source of public revenue.

Operating without the required environmental authorisations is a criminal offence and according to the NEMA, “any person who is, or was, a director of a company, at the time of the commission by that company of a scheduled environmental offence will be guilty in their personal capacity of such offence and will be liable on conviction to penalties imposed, if it is found that the offence in question resulted from the failure of the director to take all reasonable steps that were necessary under the circumstances to prevent the commission of the offence by that company.”⁴¹ The Criminal Procedure Act⁴² supports the NEMA by stating that ‘where a company commits an offence, each director will be deemed liable unless they can prove they did not take part in the commission of the offence and that they could not have prevented the commission of the offence.’ Companies and directors will, therefore, face significant risks if they do not comply with environmental requirements such as relevant authorisations and they should develop a procedure to avoid legal liability, whether criminal or civil.

The following section will discuss the underlying relationship between environmental authorisations, environmental risk management and environmental management systems.

⁴⁰ JG Nel and W Du Plessis ‘ISO 14001 and Environmental Law’ (2002) 9 *SAJELP* at 51-59.

⁴¹ Section 34(7) of the NEMA.

⁴² Section 33(5) of the Criminal Procedure Act 56 of 1995.

3. Underlying relationship between environmental authorisations, environmental risk management and environmental management systems

In terms of environmental management systems such as ISO 14001, which is based on the generic Plan, Do, Check, Act (PDCA) cycle of activities, an initial environmental review (IER), which includes a review of the organisation's legal compliance should be done. The objective of the IER is to identify issues with high significance that need to be addressed in terms of the environmental management system.⁴³ Once all non-compliances or issues have been identified, they should be evaluated for significance in terms of agreed upon and acceptable criteria. All legal non-compliances, especially authorisations, are deemed to be of a high significance for organisations.⁴⁴ The Deming management model furthermore requires that once all the significant risks, including legal non-compliance, have been identified, a structured plan of action should be developed to address these identified high risks.⁴⁵ An initial review should cover four key areas.⁴⁶ Two of the four key areas, which are relevant to the objective of this article are summarised in Table 2.⁴⁷

⁴³ See Nel and Du Plessis op cit n40 at 53.

⁴⁴ Nel and Du Plessis op cit n40 at 53.

⁴⁵ Nel and Du Plessis op cit n40 at 53.

⁴⁶ Statement made by the International Organisation for Standardization and quoted by TC Meyer and IJ Van der Walt 'Implementing Environmental Management Systems to improve sustainable development in gold mining: Environmental impacts and aspects of deep level gold mine shafts in South Africa' *Unpublished* (2004) at 4-5.

⁴⁷ Adapted from Meyer and Van der Walt op cit n46 at 5.

Table 2: Key areas to be covered by the initial review, with types of information to be considered.⁴⁸

<p>Regulatory</p>	<p>Regulatory requirements</p> <ul style="list-style-type: none"> Consider existing product authorisations, current product legislation, marketplace legislation, waste controls, environmental authorisation, codes of practice or health and safety principles and guidelines 	
<p>Type of information to consider</p>	<p>Current legal obligations and consents Future regulations Communication with regulators</p>	<p>Product legislation Marketplace legislation Waste controls</p>
<p>Key aspects</p>	<p>Aspects, processes, products and risk areas</p> <ul style="list-style-type: none"> Consider all aspects, processes, products and risk areas mentioned in the environmental authorisation and EoC documents 	
<p>Type of information to consider</p>	<p>Raw material sources Suppliers performance Transport and distribution Water quality and use Energy management and use Types and volumes of waste Waste storage and disposal methods Recycling or reuse status</p>	<p>Duty of care compliance Discharges Heat, light and power Product design Packaging Consumer management BATNEEC analysis BEO analysis</p>

It may be deduced from Table 2 that the identification and evaluation of environmental legislation and concomitant authorisations are key areas to be reviewed in an environmental management system. Additionally, the aspects, processes, products and risk areas mentioned in key area 2, which may have significant environmental impacts and risks, are likely to be coupled with an environmental authorisation. This is not the rule *per se*, but it is highly recommended that each of these significant aspects, processes, products and risk

⁴⁸ Table 2 adapted from Meyer and Van der Walt op cit n46 at 5.

areas should be evaluated in order to establish their legal status and possible authorisations needed.

It is clear that an underlying relationship between environmental authorisations, environmental risk management and environmental management systems exists. These three significant environmental management tools are obligatory for the effective management of all environmental impacts and risks related to aspects of mining organisations. The relationship between environmental management systems and environmental authorisations will be examined in more detail in the following section.

4. ISO 14001 and environmental authorisations

For the past decade, organisations around the globe have expressed the need for internationally recognised codes of practice or standards that identify the minimum requirements for sound environmental management practices. Currently ISO 14001:1996 is a household name in the environmental management field and is the generally accepted standard that organisations use to manage environmental matters effectively.⁴⁹

As mentioned previously,⁵⁰ ISO 14001 is a specification of the elements of an EMS that should be in place for an enterprise to be able to manage environmental matters effectively. It is important to realise that the ISO standards are voluntary and it may or may not be advisable for an enterprise to seek ISO 14001 registration or to follow the guidance provided by the standard in the series. The reason for this is that implementing a management system may be a time consuming and expensive exercise. The management of an organisation should decide if such a system will be beneficial for the specific organisation and should then be fully committed to the successful implementation of the system. The importance of management cannot be over emphasised as management provides resources essential to the implementation and control of the environmental management system.⁵¹ Management's commitment is the key to the successful implementation

⁴⁹ Nel and Du Plessis op cit n40 at 51.

⁵⁰ Refer to 1 at 9.

⁵¹ International Organisation for Standardization *Environmental management systems – Specification with guidance for use* South African Bureau of Standards (1996a) p. 5. Hereafter referred to as ISO 14001. The South African Bureau of Standards has adopted certain international standards and has

of an environmental management system. Achieving sound environmental performance and compliance requires organisational commitment to a systematic approach and to continual improvement of the EMS. An organisation can, however, adopt some of the core elements of the ISO 14001 as a best practice in the organisation.⁵²

With regard to the planning phase, the ISO 14001 standard refers to the legal and other requirements. Clause 4.3.2 states that 'the organisations shall establish and maintain a procedure to identify and have access to legal and other requirements to which the organisation subscribes, that are applicable to the environmental aspects of its activities, products or services.' In the following discussion some reasons will be given why it is advantageous for an organisation to implement an EMS.

4.1 Why a management system to address environmental issues and legislative requirements?

If an organisation does not have a formal, defined management system to achieve sound environmental performance and legal compliance, the functions, responsibilities and accountabilities are more likely to be lost, neglected, ignored or externalised in a maze of mini, ill-defined systems. An EMS such as ISO 14001 aims to pull potentially disparate systems into a single, integrated and functional one. Furthermore, ISO 14001 allows organisations to meet their environmental obligations in a consistent and reliable manner and provides order and consistency to organisations in order to address environmental concerns. Such a system is essential to an organisation's ability to anticipate and meet its environmental objectives and to ensure ongoing compliance with national and/or international requirements.⁵³

An organisation may have a formal system operating which is not audited or certified. However, the benefits of auditing and certifying the formal environmental system are that it may provide certainty that all environmental issues are consistently addressed. Environmental management performance is, therefore, ensured in terms of a consistently managed system.

published them as SABS IEC, SABS ISO standards, etc. Take note that the SABS has been changed to the South African National Standards (SANS).

⁵² These core elements and their relation to environmental legislation will be discussed in detail in 4.2.

⁵³ Meyer and Van der Walt op cit n46 at 1.

4.2 ISO 14001 requirements relevant to environmental authorisations

The international ISO 14001 community agreed that the legal environmental requirements of each individual country would define the minimum performance levels for organisations that operate within that country.⁵⁴

ISO 14001:1996 refers on a number of occasions to legal and other requirements, which include all relevant environmental authorisations. The requirements as specified by the standard are:

- Policy statement⁵⁵
- Determination of significance of impacts and aspects⁵⁶
- Objectives and Targets⁵⁷
- Identification of and access to relevant law⁵⁸

⁵⁴ Refer to Nel and Du Plessis op cit n40 at 33 for a detailed analysis of ISO 14001 and Environmental law.

⁵⁵ According to ISO 14001 top management of a mine that implements an environmental management system shall define the organisation's environmental policy and ensure that it includes a commitment to comply with relevant environmental legislation. For example, a policy statement may read: 'Organisation X will meet legislative requirements...' See also WM Von Zharen *Understanding the Environmental Standards* Government Institutes Inc. Rockville Maryland (1996) 44.

⁵⁶ ISO 14001 requires that a mining organisation, which follows the management system route, identifies its environmental impacts and its aspects that it can control, or over which it can be expected to exercise control, in order to determine their significance. All legal requirements are automatically classified to be of a high significance as the risks associated with not complying to legislation may be astronomical.

⁵⁷ ISO 14001 states that a mining organisation, which is implementing a management system, shall establish and maintain documented environmental objectives and targets at each relevant function and level within the mining organisation. Furthermore, the objectives and targets must be consistent with the environmental policy and consider the legal and other requirements.

⁵⁸ ISO 14001 requires that any organisations implementing a management system must identify all applicable law to their activities, products and services. Nel and Du Plessis op cit n40 at 55. argue that there are two challenges that mining organisations may face when identifying law applicable to their activities, products and services. These challenges are first of all to determine what is meant by environmental law and secondly, to identify the scope of law that might be applicable to the organisation. Furthermore, for the purpose of identifying relevant environmental authorisations, it is

- Tracking legal performance⁵⁹
- Tracking of changes in law⁶⁰
- Operational control⁶¹

important to realise that national, provincial and local legislation contains environmental authorisations.

⁵⁹ ISO 14001 demands that mining organisations, taking the management system route, should have a documented procedure as well as reliable records to ensure and demonstrate that compliance to legal requirements are regularly tracked by using tools such as inspections, monitoring, testing (element 4.5 of the standard) and legal compliance audits (element 4.5.5 of the standard).

⁶⁰ Environmental law in South Africa is not static but is constantly changed, reviewed and upgraded. It is, therefore, imperative that organisations keep track of these changes. Element 4.6 of the ISO 14001 standard demands that top management of any mining organisation that opted for the ISO 14001 management systems route reviews the suitability, adequacy and effectiveness of the management system 'in the light of changing circumstances.' This can be seen as the requirement of the standard that deals with changes of authorisations and ultimately the system itself. The ideal will be that all the enacted legislation are tracked and under control and that the organisation will then list and also track proposed legislation. See also WL Kuhre 'ISO 14001 Certification – Environmental Management Systems: A Practical Guide for Preparing Effective Environmental Management Systems' *Prentice Hall* (1995) at 78. Kuhre argues that if enacted legislation and regulatory tracking is under control, then the organisation may also want to list and track proposed legislation. In most cases in South Africa this will be a pipe dream as most South African organisations will only focus on complying with existing legislation.

⁶¹ Environmental law often specifies what is acceptable pollution and what is not. Environmental authorisations often have specific pollution standards that are applicable to specific operations and actions performed by an organisation. ISO 14001 demands that all such legal specifications be included as operational criteria in terms of which critical tasks are to be controlled and performed. The practical implication of this element is that environmental law must be included in the work instructions or standard operating procedures (SOPs) that describe the conditions in terms of which high-risk activities are to be executed.

- Documentation and records⁶²
- Corrective and preventive action⁶³
- Communication⁶⁴
- Roles, responsibilities and authorities⁶⁵
- Environmental auditing.⁶⁶

⁶²ISO 14001 requires that the organisation must establish and maintain information, in paper or electronic form, to describe the core elements of the management system and their interaction (element 4.4.4 of the standard). Organisations must, therefore, ensure that the identified legal requirements are documented (element 4.4.4 of the standard). The best practice example is to compile legal registers as well as environmental authorisation registers. Such a legal register or a manual of regulations are not required by ISO 14001 but it is highly advisable that each organisation site must keep a complete set of applicable regulations. ISO 14001 also demands that records (*inter alia* correspondence with authorities, permit applications or information on the performance of the organisation) be kept to enable auditors to verify conformance to not only ISO 14001 but also all other legal requirements (elements 4.4.4d and 4.5.4). Also see Kuhre at n60 at 78.

⁶³ In terms of ISO 14001 all deviations from legal requirements must be identified and procedures must be in place to remedy non-conformances and to prevent reoccurrence thereof (element 4.5.3). This requirement of ISO 14001 means that those employees tasked with identification and investigation of non-conformance must be trained in environmental law to enable them to identify when a contravention with the relevant legislation has taken place.

⁶⁴ ISO 14001 requires that, with regard to its environmental aspects and environmental management system, the mining organisation must establish and maintain procedures for receiving, documenting and responding to relevant communication from external interested parties (element 4.4.3 of the standard). Some authorisations may include conditions that require organisations to report on certain environmental aspects pertaining to the authorisation. Not complying with reporting conditions as set out in an authorisation may result in the cancellation of the authorisation.

⁶⁵ ISO 14001 demands that roles, responsibilities and authorities of individuals that are tasked with ensuring conformance to all environmental law requirements as discussed above, be defined, documented and communicated in order to facilitate effective environmental management. Furthermore, these individuals must be empowered and provided with the necessary resources to fulfil their duties (element 4.4.1 of the standard).

⁶⁶ ISO 14001 specifies that regular environmental audits must be conducted (element 4.5.5 of the standard). Environmental management system audits include environmental law compliance audits. All legal non-compliances, especially not having the required authorisations and not complying with authorisation conditions, are deemed to be significant findings in law compliance audits.

The issue of legal compliance is dealt with extensively by ISO 14001 and almost every element of the standard are linked to legal compliance. In theory, it may, therefore, be argued that if a mining organisation conforms to the elements of ISO 14001, the mining organisation will be legally compliant.

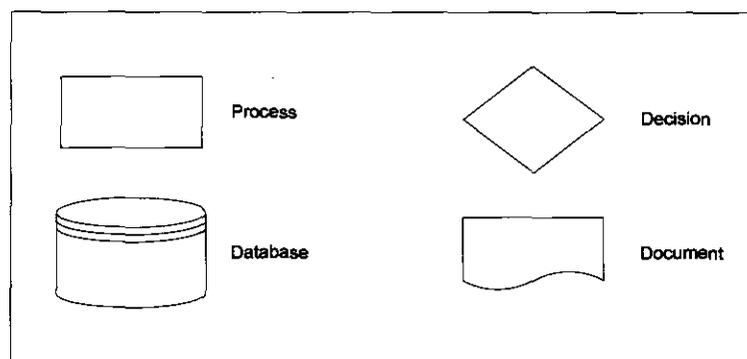
5. Proposed procedure for identifying, obtaining and maintaining environmental authorisations

Considerable time may be wasted trying to establish which regulations are applicable to an organisation. The time spent could be minimised by having an appropriate procedure with set steps to guide environmental managers to identify, obtain and maintain applicable legislation and authorisations. As seen above,⁶⁷ ISO 14001 supplies guiding principles, which an organisation could use in order to comply with all legal requirements. These guiding principles, together with personal experience in legal auditing and identifying and applying for environmental authorisations, were used to develop a generic procedure, which may be used by mining organisation to ensure full compliance to environmental authorisations. The procedure is set out in process flow diagram 1 and consists of three distinct phases:

- Phase 1: Identifying environmental authorisations;
- Phase 2: Obtaining environmental authorisations; and
- Phase 3: Maintaining environmental authorisations.

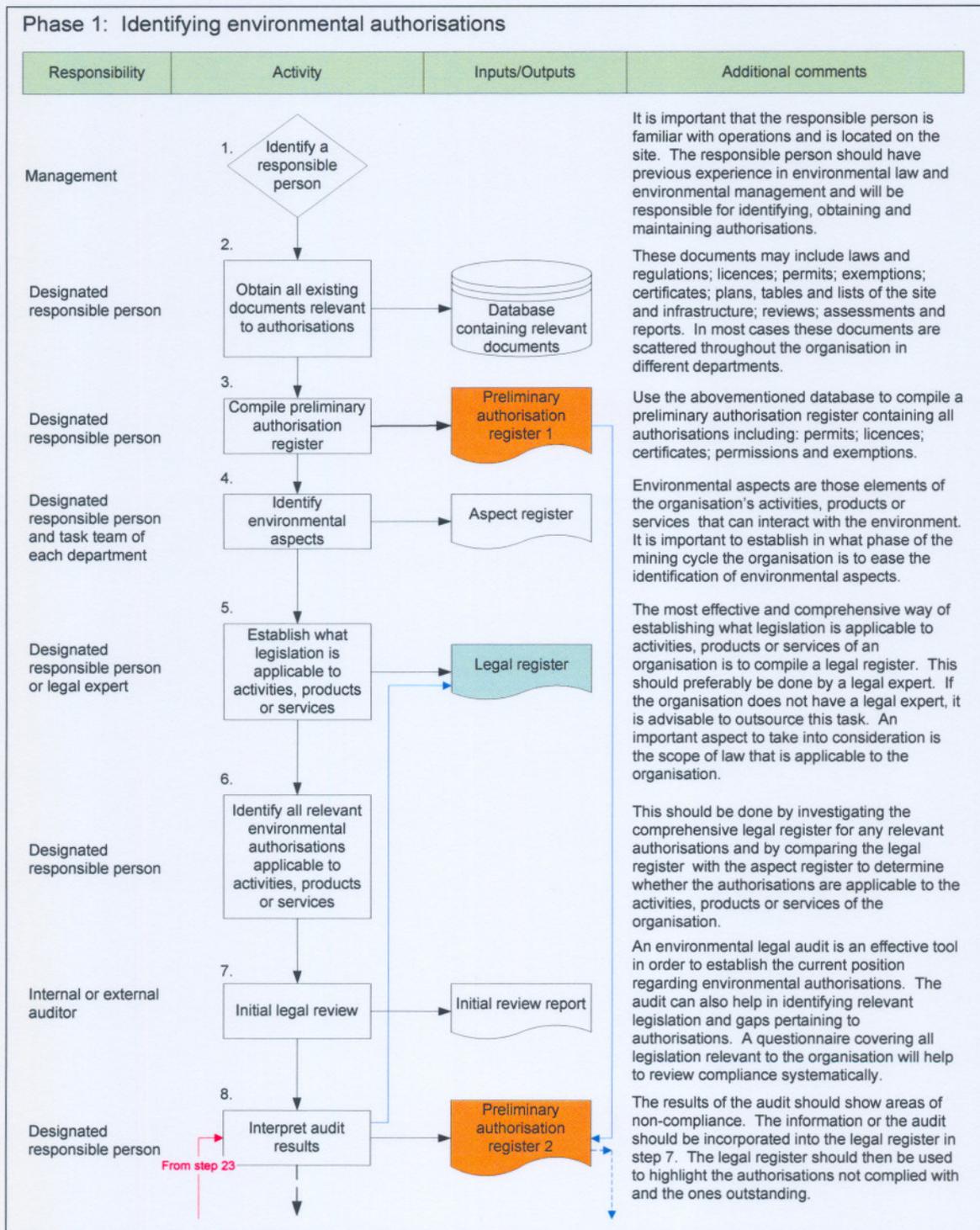
In the process flow diagram various shapes are used which have specific meaning. These shapes are illustrated in Toolbox 1 below.

Toolbox 1. Template shapes used in process flow diagram 1.

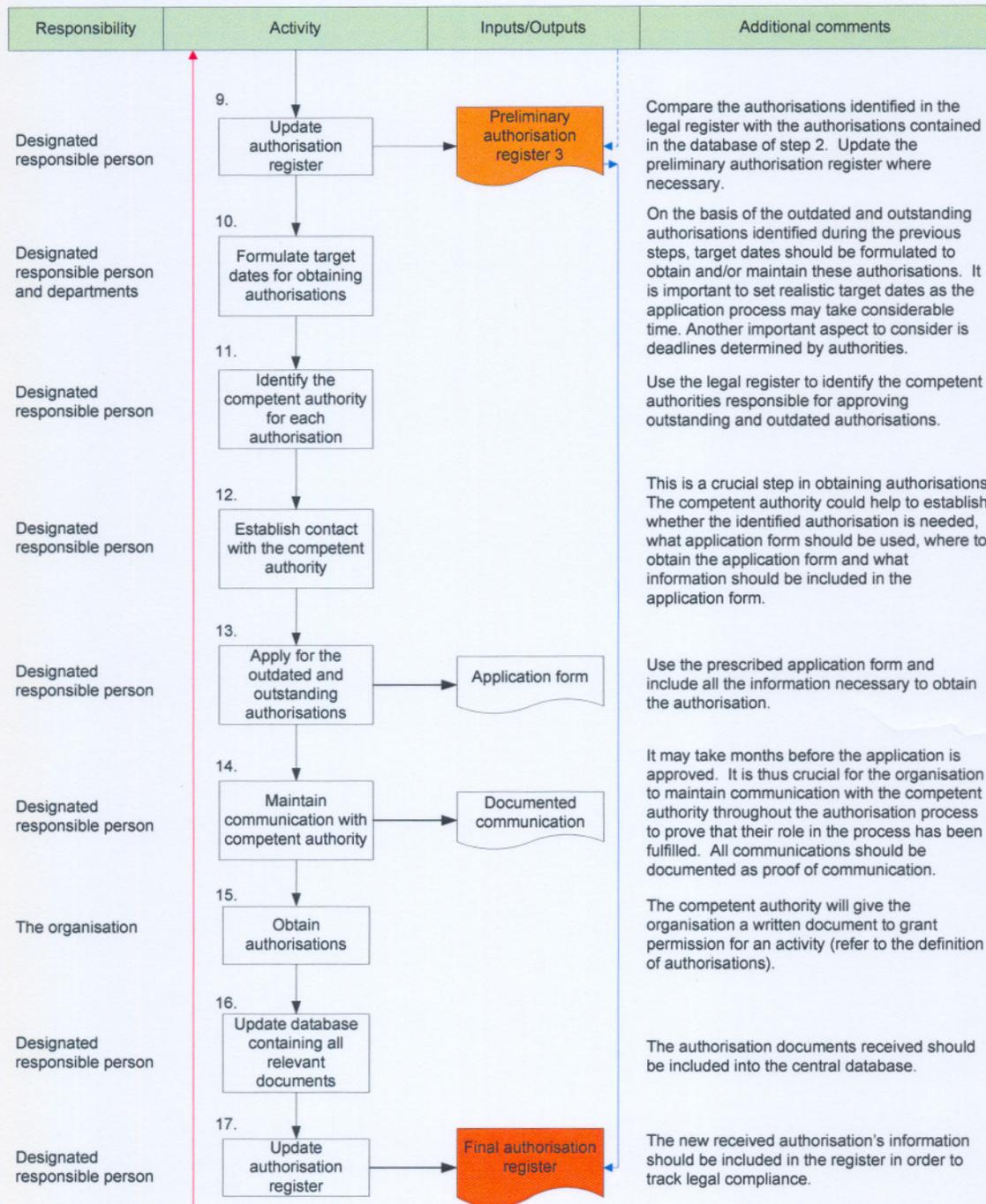


⁶⁷ See 4.

Process flow diagram 1. Identifying, obtaining and maintaining environmental authorisations



Phase 2: Obtaining environmental authorisations



Phase 3: Maintaining environmental authorisations

Responsibility	Activity	Inputs/Outputs	Additional comments
Designated responsible person	18. Track legal performance	Updated database	Ensure that the procedure for identifying, obtaining and maintaining authorisations is being followed and that reliable records including: correspondence with authorities; authorisation applications; permit register and information on the performance of the organisation are documented. Assistance may be rendered to the designated responsible person to track legal performance by outsourcing this task.
Designated responsible person or competent outsourced company	19. Track changes in law	Updated legal register	<p>The following sources should be considered in order to track changes in law:</p> <ul style="list-style-type: none"> - Authorities: authorities use the <i>Government Gazette</i> and their web sites in order to communicate changes in legislation; - Newspapers: they generally provide early indications of amendments or laws/regulations; - Chamber of commerce: some chambers of commerce publish information on legislation relevant for industry in their bulletins; - Publications (magazines): some magazines will have articles on amendments or new laws/regulations. <p>As this step requires much time and skill, it is suggested that smaller companies, lacking a legal department should outsource this task as there are various competent companies providing this service.</p>
Designated responsible person	20. Comply to conditions in authorisations		Conditions are specifications set out in the approved authorisation. These conditions must be complied with in order to maintain the specific authorisation.
Designated responsible person	21. Report on conditions	Reports on conditions	The conditions may require reports. Reporting on environmental performance as specified in the conditions of authorisations is essential in maintaining authorisations. Failure to do so may lead to the cancellation of authorisations.
Designated responsible person	22. Documentation and Records		The organisation must establish and maintain information, in paper or electronic form. All authorisations and relevant documents must be documented. This will enable auditors to verify conformance to the ISO 14001 system and compliance to legal requirements (refer to step 18 of the procedure).
Designated responsible person	23. Schedule bi-annual environmental legal audits		It is essential that systematic reviews be carried out to identify gaps. An internal or external audit may be the best tool for periodically reviewing the status of the environmental authorisations of the organisation. After the audit, the cycle from step 8 should be repeated in order to maintain authorisations.

Back to step 8.

The purpose of the visual presentation is to simplify the identification, obtaining and maintenance process for inexperienced environmental lawyers, non-lawyers and any other employee that may work with environmental authorisations.

The first of the three phases is the identification phase, which encompasses the identification of a designated responsible person in the mine, the gathering of existing documents relevant to environmental legislation and the initial review to establish the *status quo* of the organisation pertaining to environmental authorisations of the mine.

During the second phase the authorisations must be obtained. Contact should be established between the mining organisation and competent authorities to determine whether the identified authorisations should be applied for, what information should be included in the application and what application form should be used. It is crucial that communication should be maintained throughout the application process.

In the third phase, the mining organisation should establish a procedure for maintaining authorisations. The most important and difficult challenge in this phase is the tracking of changes in law. It is suggested that the mining organisations outsource this crucial function to experienced consultants if the mining organisation lacks the ability to perform this task. Furthermore, an issue that could easily be overlooked is complying with conditions stipulated by authorisations. The documentation of reports, authorisations, conditions, data and communication between authorities and the organisation is crucial for maintaining authorisations. It is, therefore, argued that by following the proposed procedure as described in process flow diagram 1, mining organisations could identify, obtain and maintain environmental authorisations.

6. Conclusion

Environmental management may be one of the most regulated disciplines in South Africa and environmental legislation imposes duties on companies and their directors personally. It is, therefore, not uncommon for many mining organisations in South Africa to have to deal with 20 or 30 different environmental authorisations simultaneously. These authorisations are, however, scattered in the maze of environmental legislation. It is, therefore, necessary for any employee dealing with environmental authorisations of a mining organisation to understand the hierarchy of environmental legislation and to take note of all applicable environmental

legislation. In this article an environmental authorisation is defined as *a written order, document or certificate that may be issued by a competent authority (government department, minister, authorised official) to an applicant to grant the applicant permission to perform certain acts or activities that may have an impact on the environment.* Authorisations are one of the main *command and control* instruments for ensuring environmental protection and are consequently, mandatory to every mining organisation. Operating without the required authorisations is a criminal offence and may pose significant risks to the mining organisation and its directors personally. It is thus imperative that all environmental authorisations should be identified, obtained and maintained throughout the mining cycle to ensure that legal liabilities, financial risks and environmental impacts are reduced. ISO 14001 contains various elements pertaining to environmental legislation, which may give guidance for ensuring legal compliance. It does not, however, specify detail for ensuring that authorisations are identified, obtained and maintained. The detailed proposed procedure in this article could guide and assist mining organisations to identify, obtain and maintain environmental authorisations. Three phases are distinguished in the proposed procedure namely; Phase 1: Identifying environmental authorisations; Phase 2: Obtaining environmental authorisations and Phase 3: Maintaining environmental authorisations. The procedure provide for designation of roles, responsibilities and authorities pertaining to the necessary activities and outputs of the three phases.

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