

# Changes in Waste legislation – What can be expected

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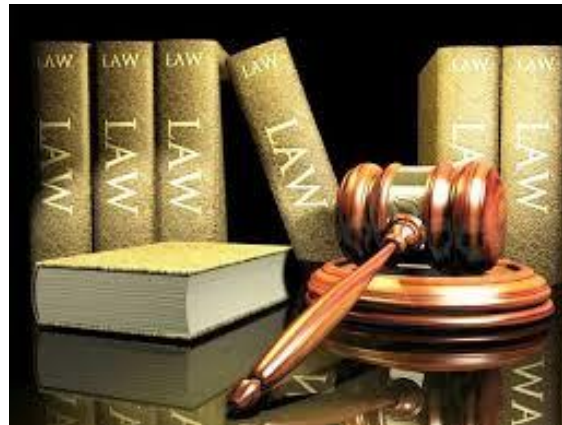
Competency Area: Solutions for a Green Economy

Operating Unit: Natural Resources and the Environment



# Outline

- Amendments to NEMA
- Amendments to NEMWA
- Waste Classification and Management Regulations
- Standards for Assessment of Waste for Landfill Disposal
- National Standard for Disposal of Waste to Landfill
- Conclusions



# Residue stock piles and deposits

869 hectares  
90 metres high  
560 million tons



> 270 tailings dams on Witwatersrand Covering 400 km<sup>2</sup>

# NEMA amendments impacting NEMWA

- National Environmental Management Laws Amendment Bill
  - Prospecting, mining and exploration or related activities are currently excluded from NEMA – dealt with under MPRDA
  - Some ancillary activities are listed into NEMA and requires environmental authorisation
  - NEMA and MPRDA have different processes and information requirements
- Proposed amendments will give effect to **one environmental system**
  - The Minister of DMR to implement environmental matters into NEMA
  - Amendment of NEMWA to give DEA mandate to develop regulations for residue deposits and stockpiles for implementation by DMR



**REDUCE**

REDUCE WASTE OR THE NEED TO RECYCLE BY  
NOT CREATING IT IN THE FIRST PLACE

**REUSE**

REUSE MATERIALS BEFORE  
RECYCLING OR DISCARDING

**RECYCLE**

TRANSFORM MATERIAL INTO  
ANOTHER USABLE MATERIAL

**TREATMENT**

REDUCE VOLUME  
OR TOXICITY

**DISPOSAL**

STORE OR BURY  
WASTE

# NEMWA amendments

- National Environmental Management: Waste Amendment Bill
  - DEA and provinces identified implementation challenges with certain provisions of NEMWA
  - DEA has not consulted any stakeholders on this Bill
- Amendments include:
  - Substitute certain definitions
    - By-product
    - Recovery
    - Re-use
    - Waste
  - Insert definition
    - Waste Management Agency

# NEMWA amendments

- Amendments include:
  - Animal carcasses will be regulated under NEMWA
  - DEA (national) will not be required to prepare an IWMP
  - Municipal IWMPs submitted to MEC for endorsement not approval
  - MEC must act in concurrence with Minister when requesting an IndWMP
  - Provincial Departments responsible for waste management will not prepare IndWMPs but IWMPs
  - Allowance for the establishment of a Waste Management Agency to deal with the different waste streams on behalf of DEA
  - Repeal section 78 dealing with appeals which are dealt with under NEMA
  - Insertion of transitional arrangements for review of landfill permits issued under ECA

# Definitions – Recovery & Re-use

- ‘Recovery’ means the controlled extraction [of a material] or retrieval of [energy] **any substance or material** from waste to produce a product
- ‘Re-use’ means to utilise articles from the waste stream [again] for a similar or different purpose without changing the form or properties of the articles





# Definitions - Waste

- ‘Waste’ means any substance, whether or not that substance can be reduced, re-used, recycled or recovered -
  - a. That is surplus, unwanted, rejected, discarded, abandoned or disposed of;
  - b. Which the generator has no further use of for the purposes of production;
  - c. that must be treated or disposed of; or
  - d. That is defined as a waste by the Minister by notice in the Gazette;  
and includes waste generated by the mining, medical or other sector , but-
    - i) a by-product is not considered to be waste; [and] or
    - ii) any portion of waste, once re-used, recycled or recovered, ceases to be waste

# Importance of clear definition

- The definition of waste has a significant effect on the implementation of the Act
- Clear distinction needed between waste and non-waste to clarify the scope of the Act
- Criminal liability depends on whether or not a substance falls within the legal definition of waste
- Prosecutions for violations of waste management regulations are decided on the interpretation of the definition of waste

# Regulations

- Waste Classification and Management Regulations
  - Introduce a new waste classification system
  - New requirements for the disposal of waste to landfill
- Standards for Assessment of Waste for Landfill Disposal
- National Standard for Disposal of Waste to Landfill

# Waste stream classification

- Classification will be done based on the Globally Harmonised System of Classification and Labelling of Chemicals (SANS 10234)
  - All waste streams will have to be classified except a few pre-classified waste streams
  - Re-classification must be done every 5 years or within 30 days of modification of process or activity
  - Assessment for disposal to landfill
  - Total concentration and leachable concentration is used
  - Based on Australian Standard Leaching Procedure
  - Analytical protocol differs – Acid rain test is no longer used
  - Must be done at SANAS accredited laboratories (3 years)



# Waste stream classification

- Waste previously hazardous may now be non-hazardous and *vice versa*
- Delisting of waste streams for disposal is no longer allowed

# Landfill standards

- Classification of landfills will change
  - Only four classes are proposed
  - Losing C,S and M Minimum Requirement landfill classes
  - Standards apply to all landfills and does not allow for exemptions



<b>LEGEND</b> <b>B<sup>-</sup></b> = No significant leachate produced <b>B<sup>+</sup></b> = Significant leachate produced <b>R</b> = Requirement <b>N</b> = Not a requirement <b>F</b> = Flag; special consideration to be given by expert or departmental representative	<b>CLASSIFICATION SYSTEM</b>									
	<b>G</b> <b>General Waste</b>								<b>H</b> <b>Hazardous Waste</b>	
	<b>C</b> Communal Landfill		<b>S</b> Small Landfill		<b>M</b> Medium Landfill		<b>L</b> Large Landfill		<b>H:h</b> <b>Hazard Rating</b> <b>3 &amp; 4</b>	<b>H:H</b> <b>Hazard Rating</b> <b>1- 4</b>
<b>MINIMUM REQUIREMENTS</b>	<b>B<sup>-</sup></b>	<b>B<sup>+</sup></b>	<b>B<sup>-</sup></b>	<b>B<sup>+</sup></b>	<b>B<sup>-</sup></b>	<b>B<sup>+</sup></b>	<b>B<sup>-</sup></b>	<b>B<sup>+</sup></b>		
Appoint responsible person	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
Minimum no. of boreholes	N	N	1	1	3	3	5	5	F	F
Leachate Management	N	N	N	F	N	<b>R</b>	N	<b>R</b>	<b>R</b>	<b>R</b>
Daily cover	F	F	F	F	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>

Source: Minimum Requirements for Disposal by Landfill 1998

# Conclusions

- Implementation of environmental systems for mining is streamlined
- Some implementation challenges are addressed
- Definitions changes add other challenges
- Waste classification system is aligned with international approaches and based on scientific methods
- Landfill barrier design requirements are upgraded to ensure environmental protection
- Landfilling will become more expensive
  - Hazardous waste landfill costs will increase by about 20% with the implementation of new regulations
  - General waste landfill costs can double if Class B designs are implemented



# Thank You

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