(31 August 2015 – to date)

MINE HEALTH AND SAFETY ACT 29 OF 1996

(Gazette No.17242, Notice No. 967 dated 14 June 1996. Commencement date: 15 January 1997 for all sections with the exception of sections 86(2) and (3), which came into operation on 15 January 1998, [Proc.No.4, Gazette No. 17725])

GUIDELINE FOR A MANDATORY CODE OF PRACTICE FOR UNDERGROUND RAIL BOUND EQUIPMENT

General Notice 919 in Government Gazette 39228 dated 25 September 2015.
Effective date: 31 August 2015

I DAVID MSIZA, Chief Inspector of Mines, under section 49(6) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and after consultation with the Council, hereby issues the guideline for underground rail bound equipment in terms of the Mine Health and Safety Act, as set out in the Schedule.

(Signed)
DAVID MSIZA
CHIEF INSPECTOR OF MINES

SCHEDULE

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DEPARTMENT OF MINERAL RESOURCES

MINE HEALTH AND SAFETY INSPECTORATE

GUIDELINE FOR THE COMPILATION OF A MANDATORY CODE OF PRACTICE FOR

UNDERGROUND RAIL-BOUND EQUIPMENT

(Signed)
CHIEF INSPECTOR OF MINES

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CONTENTS

PART A: THE GUIDELINE

1. FOREWORD

1.1 The Commission of Inquiry into Safety and Health in the Mining Industry chaired by the Honourable Mr Justice R N Leon identified haulage and transport accidents as the second largest category of accidents in mines.

In an initiative to address this problem, a tripartite task group was established soon after the Leon commission under the auspices of the Mining Regulation Advisory Committee (MRAC) to revise the then existing Department of Minerals and Energy (DME) Guideline for Underground Rail Bound Transport, and the then existing Minerals Act Regulations, Chapter 18, dealing with rail bound transport. Arising

from this work new Regulations were issued in Chapter 8 of the Mine Health and Safety Act (MHSA), 1996 (Act No 29 of 1996) Regulations which came into force in 2004 and a guideline was issued on 1 August 2003 and came into force on 1 February 2004.

Despite the above revised legislation accidents involving rail bound equipment remained unacceptably high and in 2012 the Mine Health and Safety Council (MHSC) requested MRAC again to review the legislation to include appropriate minimum performance standards. This led to a current review of this Guideline and the Regulations.

1.2 According to the South African Mines' Reportable Accident Statistical System (SAMRASS), rail bound transport contributed approximately 8% of all reportable accidents during the period 1 January 2003 to 31 December 2012. Of the 3 125 rail bound reportable accidents, 145 persons lost their lives and this can be broken down into the following categories:

Locomotive drawn vehicle	51.7%
Hand tramming	1.4%
Locomotive	36.5%
Re-railing	6.9%
Coupling/Uncoupling	3.5%

1.3 This document was compiled bearing the significant risks associated with underground rail bound transport equipment in mind. This can be tested as found in paragraph 8 of this Guideline.

2. LEGAL STATUS OF THE GUIDELINE AND COPs

In accordance with Section 9(2) of the MHSA an employer must prepare and implement a COP on any matter affecting the health or safety of employees and other persons who may be directly affected by activities at the mines if the Chief Inspector of Mines (CIOM) requires it. These COPs must comply with any relevant guideline issued by the CIOM (Section 9(3)). Failure by the employer to prepare or implement a COP in compliance with this Guideline is a breach of the MHSA.

3. THE OBJECTIVE OF THIS GUIDELINE

3.1 The objective of this guideline is to enable the employer of every mine to compile a COP for minimum standards, which, if properly implemented and complied with, would improve the health and safety of persons using or affected by rail bound transport and equipment.

4. ACRONYMS AND DEFINITIONS

In this guideline for a COP or any amendment thereof, unless the context otherwise indicates:

4.1 **'abnormal load'** means a load not regularly transported on standard rolling stock due to its excessive mass or physical dimensions, or both,

4.2 **'arresting device'** means a device or combination of devices, excluding the brakes, holding a train or part of a train stationary.

4.3 **'bogie'** means a specifically designed material car that is normally used for the slinging and transporting of long and cumbersome material and that can independently articulate on its own set of wheels.

4.4 **'braking system'** means a device or combination of devices capable of reducing the speed of a locomotive or train to a standstill including emergency brake, park brake and service brake.

4.4.1 **'emergency brake'** means an easily accessible device, which when applied, will bring the locomotive or train to a standstill under all operating conditions;

4.4.2 **'park brake'** means the brake capable of holding a fully loaded, parked train stationary, at the maximum operating gradient and loading, without the support of any other braking system; and

4.4.3 **'service brake'** means the primary operating brake.

4.5 **'buffer'** means a device permanently attached to a locomotive or rolling stock, which enables coupling with other locomotives or rolling stock.

4.6 **'COP'** means Code of Practice.

4.7 **'coupler'** means a device or set of devices specifically designed to couple two buffers.

4.8 **'deceleration rate'** means the rate of decrease of speed of motion of a locomotive or train.

4.9 **'DMR'** means the Department of Mineral Resources.

4.10 **'dynamic type test'** means the test conducted on a train to determine the deceleration rate and braking efficiency.

4.11 **"dead man's device"** means any controlling device that, when the driver's hand, foot or body is removed from the controlling device, will cause the vehicle control circuit to be interrupted and "fail to-safe".

4.12 **'gradient'** means the ratio of the difference in elevation between two given points and the horizontal distance between them.

4.13 **'hand tramming'** means the movement of rolling stock on rails, manually by a person or persons.

4.14 **'locomotive'** means a self-propelled rail bound machine which requires either a driver for manual operation or an operator for automatic operation.

4.15 **'MHSA'** means the Mine Health and Safety Act.

4.16 **'MRAC'** means the Mining Regulation Advisory Committee.

4.17 **'RBE'** means rail bound equipment. "Rail Bound Equipment" means all self-propelled and other equipment used for transportation purposes having wheels running on rails underground and within the surface demarcated bank area at a mine. It includes locomotives, hoppers, material cars, explosive cars, guard cars, drill carriages and all other items of equipment transported on rails.

4.18 **"Rail track infrastructure"** means the installed infrastructure on which rail bound equipment operates underground including the surface demarcate bank area.

This includes the permanently installed rails and fasteners, sleepers, ballast, switches, crossing points, turn-outs and their operating mechanisms.

4.19 **'rolling stock'** means any rail bound equipment that is not self-propelled.

4.20 **'SAMRASS'** means the South African Mines Reportable Accident Statistical System.

4.21 **'SIMRAC'** means the Safety in Mines Research Advisory Committee.

4.22 **'speed indicator'** means a device fixed to the locomotive to indicate the speed of the locomotive;

4.23 **'static test'** means the test carried out to determine the compliance of the brake holding power of a locomotive braking system measured against the design specification or an appropriate safety standard.

4.24 "**Train**" means a combination of rail bound equipment coupled together being transported under the power of a locomotive. The locomotive shall be considered as part of the train. A locomotive in transit by itself shall be classified as a train.

4.25 "**TMM**" means Trackless Mobile Machines,

4.26 **"Rail traverser"** means a piece of rail equipment that is used to interrupt a railway line and consisting of a length of track or tracks which can be moved from side to side in a direction perpendicular to the railway line.

4.27 **'visibility'** means the human ability to distinguish colour, size, movement and distance in the field of vision.

5. SCOPE

5.1 This guideline covers the health and safety risks associated with RBE underground and on surface within the demarcated shaft station bank area.

5.1.1 Design and specification of RBE.

5.1.2 Design and specification of the operating environment of RBE.

5.1.3 Operational requirements of RBE.

5.1.4 Maintenance of RBE.

5.1.5 Personnel operating RBE.

5.2 This guideline excludes the use of RBE on surface outside the demarcated shaft station bank area as well as the following installations:

5.2.1 Endless rope haulage installations;

5.2.2 Monorails;

5.2.3 Chairlifts;

5.2.4 Overhead cranes and crawls;

5.2.5 RBE used in shafts, winzes and raises;

5.2.6 Lifting machines; and

5.2.7 Stackers and re-claimers.

6. MEMBERS OF THE DRAFTING COMMITTEE

This document was prepared by the MRAC Rail Bound Task Group.

The members who assisted in the compilation of this guideline were:

Messrs:	A.A. Coutinho	-	State
	D.J. Janse van Rensburg	-	State
	P. Bezuidenhout	-	Employers
	W. Allen	-	Employers
	A. J. Greyling	-	Employers
	D. Botha	-	Employers
	W. Stemmet	-	Employers
	B. O Connor	-	Employers
	C. Smith	-	Employers
	M. Llale	-	Labour

PART B: AUTHOR'S GUIDE

1. The COP must, where possible, follow the sequence laid out in Part C "Format and Content of the COP". The pages as well as the chapters and sections must be numbered to facilitate cross-reference. Wording must be unambiguous and concise.

2. It should be indicated in the COP and on each annexure to the COP whether:

   (a) The annexure forms part of the COP and must be complied with or incorporated in the COP or whether aspects thereof must be complied with or incorporated in the COP; or

   (b) The annexure is merely attached as information for consideration in the preparation of the COP (i.e. compliance is discretionary).

3. When annexures are used, the numbering should be preceded by the letter allocated to that particular annex and the numbering should start at one again, (e.g. 1, 2, 3...A1, A2, A3…).

4. Whenever possible illustrations, tables, graphs and the like should be used to avoid long descriptions and/or explanations.

5. When reference has been made in the text to publications or reports, references to these sources must be included in the text as footnotes or side notes as well as in a separate bibliography.

6. Relevant SIMRAC projects should also be considered when assessing risks. A list of relevant references as included in Annexure 2 (which is attached for information purposes).

PART C: FORMAT AND CONTENT OF THE CODE OF PRACTICE

1. TITLE PAGE

The title page must include the following:

1.1 Name of mine;

1.2 The heading; "Mandatory Code of Practice for the Operation of Underground Rail Bound Transport Equipment";

1.3 A statement to the effect that the COP was drawn up in accordance with guideline DMR 16/3/2/2-A4 issued by the CIOM;

1.4 The mine reference number for the COP;

1.5 The effective date; and

1.6 Revision dates.

2. TABLE OF CONTENTS

The COP must have a comprehensive table of contents.

3. STATUS OF MANDATORY CODE OF PRACTICE

Under this heading the COP must contain statements to the effect that:

3.1 The mandatory COP was drawn up in accordance with Guideline 16/3/2/2-A4 issued by the CIOM;

3.2 This is a Mandatory COP, in terms of Sections 9(2) and (3) of the MHSA;

3.3 The COP may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the Code is effective and fit for purpose;

3.4 The COP supersedes all previous relevant COPs; and

3.5 All managerial instructions or recommended procedures (voluntary COPs) and standards on the relevant topics must comply with the COP and must be reviewed to assure compliance.

4. MEMBERS OF THE DRAFTING COMMITTEE

4.1 In terms of Section 9(4) of the MHSA the employer must consult with the health and safety committee on the preparation, implementation or revision of any COP.

4.2 It is recommended that the employer should, after consultation with the employees in terms of the MHSA, appoint a committee responsible for the drafting of the COP.

4.3 The members of the drafting committee assisting the employer in drafting the COP should be listed giving their full names, designations, professional qualifications, affiliations and experience. This committee should include competent persons sufficient in number to effectively address the drafting of the COP.

5. GENERAL INFORMATION

The general information relating to the mine must be stated in this paragraph. The following minimum information must be provided:

5.1 A brief description of the mine and its location;

5.2 The commodities produced;

5.3 The mining methods/mineral excavation processes.

5.4 A description of the rail bound transport systems used at the mine listing the types of rail bound equipment and indicating the machine population; and

5.5 Other relevant COPs.

6. TERMS AND DEFINITIONS

Any word, phrase or term of which the meaning is not absolutely clear or which will have a specific meaning assigned to it in the COP, must be clearly defined. Existing and/or known definitions should be used as far as possible. The drafting committee should avoid jargon and abbreviations that are not in common use or that have not been defined. The section on definitions should also include acronyms and the technical terms used.

7. RISK MANAGEMENT

7.1 Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work and record the significant hazards identified and risk assessed. The COP must address how the significant risks identified in the risk assessment process must be dealt with, having regard to the requirement of Section 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the risk, thereafter to control the risk

at source, thereafter to minimize the risk and thereafter, insofar as the risk remains, to provide personal protective equipment and to institute a programme to monitor the risk.

7.2 To assist the employer with the risk assessment, all possible relevant information such as accident statistics, ergonomic studies, research reports, manufacturers' specifications, approvals, design criteria, performance figures for all relevant underground rail bound transport systems and equipment must be obtained and considered.

7.3 In addition to the periodic review required by Section 11(4) of the MHSA, the COP should be reviewed and updated after every serious incident relating to the topic covered in the COP, or if significant changes are introduced to procedures, mining and ventilation layouts, mining methods, plant or equipment and material.

8. ASPECTS TO BE ADDRESSED IN THE MANDATORY COP

The COP must set out how the significant risks identified in the risk assessment process referred to in paragraph seven above will be addressed. The COP must cover at least all the aspects set out hereafter unless there is no significant risk associated with that aspect at the mine.

8.1 Design and specification

In order to ensure that all RBE is appropriate for the specific circumstances at the mine and is used within its designed and operating specifications, the COP must describe the following information.

8.1.1 Rail Bound Equipment (RBE)

8.1.1.1 Locomotives

Provide a detailed table containing the following information as a minimum for all locomotives in use,

a) Prime mover (electrical, battery, diesel etc.).

b) Rated capacity of each locomotive.

c) Original Locomotive Equipment Manufacturer (OEM).

d) Locomotive controller make and model.

e) Maximum design tramming capacity (tons).

f) Maximum designed speed (kilometres/hour).

g) Maximum designed operating gradient (degrees to the horizontal).

h) Gross mass in kilograms.

i) Overall dimensions including battery if applicable (millimetres),

j) Designed rated power (kiloWatt).

k) Manual, remote or remotely controlled.

l) Types of brakes (S= service, P = park, E = emergency).

m) Proximity detection system.

Braking systems

List and describe in detail the braking systems installed on all locomotives, including but not be limited to, the design, specification and method of the application:

a) Park brake;

b) Service brake; and

c) Emergency brake; or

d) Any combination of a, b and c above.

8.1.1.2 Rolling stock

List and describe for each type, make and class of each item of rolling stock the following information as a minimum.

a) Type (hopper, material car, etc.).

b) Capacity (kilogram, number of persons, pipes, rails in bogies etc.).

c) Overall dimensions without buffers.

d) Overall dimensions with buffers.

e) Buffer design (link and drop pin, automatic coupler, etc.).

f) Buffer height measured from top of rail to centre of buffer (mm).

g) Wheel base dimensions (millimetre).

h) Fixed continuous drawbar attached between buffers (yes or no).

i) In the case of hoppers, the method of discharge.

8.1.1.3 Rail bound cycles

Where persons are transported by means of rail bound cycles, describe the following:

a) Approved design and construction of cycle;

b) Effective braking requirements;

c) Proper seating arrangements to prevent standing of persons during transport;

d) The number of persons allowed to travel on the cycle;

e) Audible warning device to warn other RBE users in the vicinity; and

f) Measures to ensure visibility of the cycle.

8.1.2 Rail infrastructure

List and describe the following information as a minimum:

Rail track installation

a) Rail mass (kilogram per metre);

b) Rail gauge and tolerances (millimetre);

c) Rail sleeper types (wood, concrete steel etc.);

d) Rail sleeper spacing standards (millimetre);

e) Fish plate type and design;

f) Method of securing rails to sleepers (e-type, dog spike etc.);

g) Welding of rails joints if applicable;

h) Maximum permissible rail joint gaps (millimetre);

i) Maximum permissible rail joint horizontal alignment (millimetre);

j) Maximum permissible rail joint crown height difference (millimetre);

k) Provisions for drainage;

l) Ballast type;

m) Rail switch type (single tongue, double blade etc.);

n) Rail switch methods of operation (tumbler, lever etc.); and

o) Rail switch dimensions (millimetre).

Rail traversers

Describe the design and layout for rail traversers, where used, to permit only one item of RBE at a time to pass over the traverser car.

8.1.3 Haulages and associated infrastructure

Describe, taking into account ergonomic principles where appropriate, the design and layout of underground haulages and associated infrastructure where RBE is used, including the following aspects:

a) Safe-guarding of persons against accidental contact with RBE;

b) Station lay-out including types, configurations and methods of activation of arresting devices, their rated energy absorption capacities and any other provisions for arresting RBE and trackless mobile machines (TMM) inadvertently entering shaft station areas;

c) Boarding and alighting platforms for persons;

d) Battery bays including provisions for changing batteries;

e) Workshops;

f) Ore loading facilities;

g) Diesel refuelling bays;

h) Timber bays, waiting places and any other similar excavations in immediate proximity to the rail track infrastructure;

i) Illumination including light intensity, type, spread and range of light beams;

j) Overhead trolley line infrastructure;

k) Crossings where RBE and TMM interface;

l) Warning sirens and alarms; and

m) Signage including speed restrictions, restricted areas, loading and tipping areas, no entry signs to unauthorised persons, work in progress, electrical equipment, etc.

8.1.4 Tipping arrangements

Describe the design, configuration and layout of tipping arrangements, including the following:

a) Method of discharge operation (e.g. side tipping, bottom discharge);

b) Illumination;

c) Safeguarding of persons from falling into ore passes or being struck by falling rock by provision of safety devices such as safety belts, lockout facilities, closing or opening of ore passes when tipping is not in progress;

d) Dust control;

e) Provisions for the control of water in the tipping area;

f) Facilities for the re-railing of RBE inside tipping areas; and

g) Provisions for the safe passage of pedestrians.

8.2 Operational Requirements

The COP must describe measures to ensure that the manner in which RBE is operated is such that the significant risks are minimised, which measures must include at least the following:

8.2.1 Traffic management plan

The traffic management plan should include the following:

a) Safe start-up, operation, parking, shut-down, loading, securing and prevention of unauthorised access of RBE;

b) Isolation and lockout requirements (mechanical, electrical, hydraulic, pneumatic, radio frequency, etc.);

c) Areas where people are travelling, including traffic control, speed and clearance restrictions;

d) Re-railng of RBE;

e) Spillage control;

f) Transport of persons, materials, minerals, explosives, hazardous chemical substances, abnormal loads, long material, special purpose cars, loaders, etc.;

g) Towing of RBE;

h) Hand tramming of RBE;

i) Safe tramming of RBE through obstructions such as ventilation doors and other restricted areas such as regulators, fire doors, bull noses, water doors, battery bays, workshops, fuelling stations, waiting stations as well as blind curves or restricted operator visibility, etc;

j) Demarcation of restricted areas where clearances are not met;

k) The protection of driver, guard and other persons during transport activities;

l) Recording and reporting of any failures, incidents or derailments involving RBE affecting health and safety;

m) Transport of tools and equipment permitted on the locomotive and guard car;

n) The safe remote operation of a locomotive or train that is remotely operated;

o) The safe operation of any manually operated switch on any track from a safe position clear of the track by means of a suitable tool or device;

p) Measures to prevent inadvertent run-away of a locomotive or train;

q) Remote or manual operating methods of ventilation doors;

r) Fouling marks to indicate switches, etc.;

s) Emergency procedures including the procedure in case of lamp or luminaire failure;

t) Overhead trolley line systems;

u) Operation of proximity detection systems, where applicable;

v) Coupling and uncoupling of RBE;

w) Communication protocols between operators, guards and pedestrians;

x) The testing of braking systems;

y) Pre-use checklist implementation; and

z) Interaction right of way protocols between RBE and TMM.

8.2.2 Battery charging bays (where applicable)

The COP must describe the procedures for the following;

a) Charging of traction batteries.

b) Changing of traction batteries.

c) Actions to be taken in the event of a power failure.

d) Actions to be taken in the event of a fire.

e) Actions to be taken in the event of an acid spillage.

f) Actions to be taken in the event of a ventilation failure.

8.2.3 Diesel refuelling bays (where applicable)

The COP must describe the procedures for the following:

a) Transportation, storage and handling methods for diesel fuel.

b) Refuelling of diesel powered locomotives.

c) Actions to be taken in the event of a power failure.

d) Actions to be taken in the event of a fire.

e) Actions to be taken in the event of a diesel spillage.

f) Actions to be taken in the event of a ventilation failure.

8.2.4 Visibility of RBE and persons

The COP must describe the methods and procedures for the use of road signs and warning devices, including at least the following:

a. The placing of signs to warn persons against the presence of parked, stationary and broken down RBE;

b. Measures to ensure the visibility and safety of pedestrians, cyclists or other persons in the proximity of RBE;

c. Timeous warning systems, where persons are required to work in haulages where RBE is operated, for either the operator or such persons; and

d. Dust control so as not to impair visibility.

8.2.5 Safety devices and provisions

The COP must describe the specifications and operation of signalling- and warning devices or provisions, including the following:

a) Flashing lights on remote controlled locomotives for identification;

b) Warning lights when entering dangerous areas;

c) Tail lights on locomotives and guard cars indicating the direction of travel of RBE;

d) Clear markings, signage and demarcations indicating restricted areas where persons travel;

e) Audibility of bells or sirens for warning persons whilst travelling where RBE operates;

f) Overhead electric line warning signage;

g) Locomotive controller dead man's device; Dead man's device as defined in SANS 1809: 2003;

h) Signalling systems to clearly distinguish instructions;

i) Speed governors as a means of regulating speed where installed;

j) Where installed speed indicators for operators of RBE equipment to indicate actual speed;

k) Indications, signage and other warning provisions to the operators of RBE of any work being undertaken in the area of travel;

l) Traffic lights, and/or any other provisions to indicate the right of way for safe passage;

m) Where installed over-speed alarms to warn operators if speed is exceeded;

n) Communication systems between the locomotive operator and the guard for effective control and instruction;

o) The inspection and testing of all safety devices and provisions at intervals determined in the COP; and

p) Provisions for and means of extinguishing fires on trains.

8.2.6 Rail bound cycles

The COP must describe standards and procedures for the safe operation of rail bound cycles.

8.3 Maintenance and modifications

The COP must describe measures to ensure that RBE is adequately maintained or modified covering at least the following:

8.3.1 Maintenance of RBE

The COP must describe the maintenance, over inspection requirements and frequencies for all types of RBE including methods of isolation and making safe of the RBE.

8.3.2 Rail track maintenance

The COP must describe the maintenance, over inspection requirements and frequencies for the rail track infrastructure.

8.3.3 Modifications to RBE

The COP must describe procedures for any modifications to RBE, addressing as a minimum, a risk assessment, record keeping of design and specification changes and updating of engineering drawings.

8.3.4 Procedure for the testing of braking systems

The COP must describe the methods and procedures for the testing of braking systems, including the following:

a) Static testing of braking systems;

b) Dynamic type testing of braking systems to ensure the retardation rates required by Regulation 8.3.18 (see Annexure 1), which must be complied with;

c) Recording of the results of static and dynamic type tests; and

d) Safe keeping of test results, for a period to be specified in the COP.

8.4 Personnel

The COP must describe the procedures for the selection, training, testing and associated record keeping for the operators of RBE, covering at least the following:

8.4.1 Selection criteria

Selection criteria for operators should prescribe the minimum standards in relation to the following:

- Hand - eye co-ordination;
- Reaction time;
- Attention span;
- Eyesight;
- Angle of vision;
- Night or colour blindness;
- Hearing;
- Depth perception;
- Aggressiveness; and

- Anthropometrics (size, height, mass, etc.).

8.4.2 Training

The COP must describe the methods, procedures and training to ensure that RBE is only operated by persons who are competent to do so.

8.4.3 Authorisation to operate RBE

The COP must describe the procedures for the appointment and authorisation of competent persons to operate RBE.

8.4.4 Record keeping

The COP must describe the procedures, methods and period of record keeping of all information associated with the training, declaring competent, authorisation and appointment of all RBE operators.

PART D: IMPLEMENTATION

1. IMPLEMENTATION PLAN

1.1 The employer must prepare an implementation plan for its COP that makes provision for issues such as organisational structures, responsibilities of functionaries and programs and schedules for this COP that will enable proper implementation of the COP. (A summary of/and a reference to, a comprehensive implementation plan may be included).

1.2 Information may be graphically represented to facilitate easy interpretation of the data and to highlight trends for the purpose of risk assessment

2. COMPLIANCE WITH THE COP

The employer must institute measures for monitoring and ensuring compliance with the COP.

3. ACCESS TO THE COP AND RELATED DOCUMENTS

3.1 The employer must ensure that a complete COP and related documents are kept readily available at the mine for examination by any affected person.

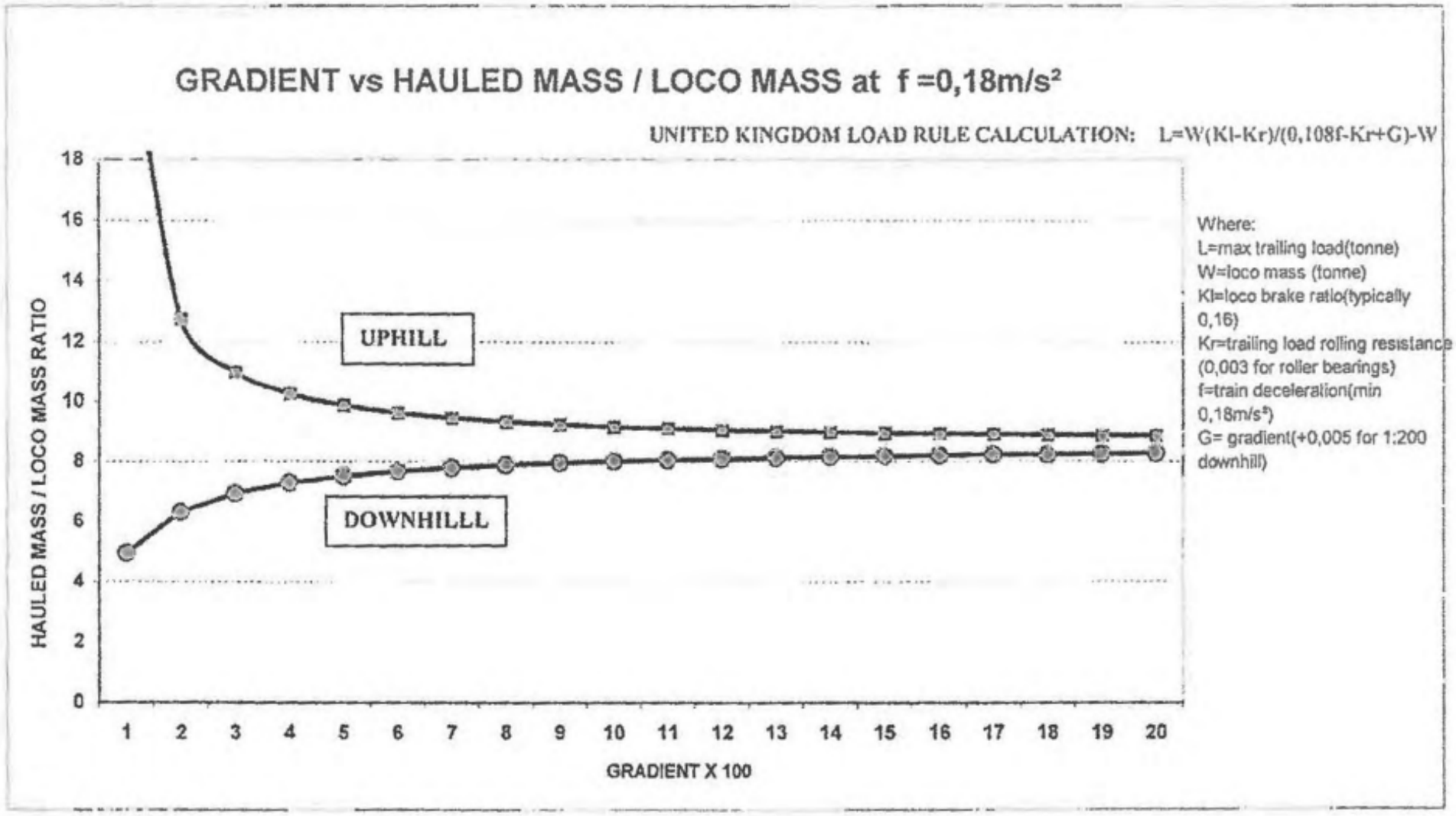
3.2 A registered trade union with members at the mine, or where there is no such union, a health and safety representative on the mine, or if there is no health and safety representative, an employee representing

the employees on the mine, must be provided with a copy of the written request to the manager. A register must be kept of such persons or institutions with copies to facilitate updating of such copies.

ANNEXURE 1:

(This annexure must be complied with)

See paragraph 8.3.4 b



Prepared by:

ANNEXURE 2: References

The following documents were consulted in drafting the guideline:

a) Recommended Practice for Safe Operation of lateral Underground Transport - published by the Chamber of Mines,

b) Guidelines for the Design, Installation & Maintenance of Underground Track Works -Chamber of Mines publication of 1987.

c) Trucking and Tramming Risk Assessment - issued by IRCA.

d) Federal Mine Safety & Health Act of 1977.

e) Department of Minerals and Energy Guideline and Minimum Standards for the preparation of a Code of Practice for Underground Rail Transport.

f) SIMRAC final Project Report "Investigation of the Causes of Transport and Tramming Accidents other than Coal, Gold and Platinum (1966).

g) Increasing the Efficiency, Economy and Safety of Tracked Transport - Published by the Underground Railways Assoc.

h) Report of the Commission of Inquiry into the Vaal Reefs Mining Accident.

i) Trucking & Tramming - a Risk Assessment Approach to Accident Reduction - published by Grant Purdy & Frank Pascoe.

j) Report by the Mining Regulations Advisory Committee Task Group on Haulage and Transport Accidents - November 1996.

k) Loco Inspection Services cc - Checklist.

l) Statistical Summary of Accidents reported to the Chief Inspector of Mines: 1/1/84 -31/12/97.

m) Health & Safety Executive - Underground Locomotive Haulage.

n) Track laying for Underground Haulage - published by the National Coal Board (revised 1973);

o) Machines for Underground Mines - European Standard - published by CEN;

p) Industrial Buffers - published by OLEO.

q) Process & Guiding Principles for the formulation of Regulating Mechanisms under the Mine Health & Safety Act - published by MRAC 29/5/98: Circ.42REV1/98.

r) Aide Memoire - published by MRAC.

s) SIMRAC Draft - Report on Investigation of Safety of Rail Vehicles and Systems Operating in South African Mines - GAP 520 - Published by Turgis Technology (Research Agency).

t) Guideline for a Code of Practice for Trackless Mobile Machinery.

u) Failsafe Underground Mine Locomotive Control Systems - SABS 1809 of 1999.

v) Performance Requirements for Locomotive Braking systems - SIMRAC GAP 635 REPORTS.