

Title: **COLOUR CODING,
SYMBOLIC SAFETY SIGNS
AND DEMARCATION**

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Part **21 – Risk Management**

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Compiled by



Ingrid Khumalo

**Approved by (SCOWT SC
Chairperson)**



Mxolisi Thanjekwayo

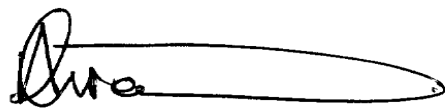
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Date: 21/10/2011

Risk Management SC Chairperson

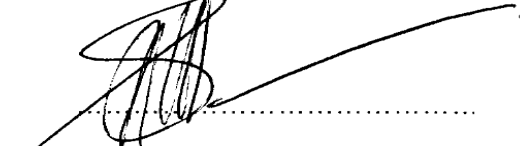
Date: 21/10/2011

Functional Responsibility (Dx)



Alex Stramrood

Authorized by



Louis Maleka

**Risk Management SC
Chairperson**

Date: 02/11/2011

Acting Divisional Executive

Date: 15/11/2011

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Foreword

The purpose of this standard is to ensure standardisation in terms of the use of symbolic safety signs, colour coding and floor demarcation within the Distribution Division. In terms of the Occupational Health and Safety Act, the word Notice includes both Signs and Notices.

For easy reference in this standard:

- A notice is an inscription in English and/or any other language.
- A sign is a standard symbolic safety sign.

Revision history

This revision cancels and replaces revision no: DISASACH6: Symbolic Safety Signs and Colour Coding.

This revision cancels and replaces revision no 1 of document no. **DST_34-1168**.

Date	Rev.	Compiled By	Clause	Remarks
Nov 2011	2	I Khumalo	Clause no.	Amended 4.3.3 added danger.
Aug 2008	1	S Govender		Document approved New Document Format, inline with Corporate Identity. Changed title of Standard from Symbolic Safety Signs and Colour Coding TO Colour Coding, Symbolic Safety Signs and Demarcation.
			Section 2	Updated Normative References.
			Section 4	The following sections of the text were amended, specifically: Amended 4.1 General, specifically: Amended 4.1.4, deleted previous 4.1.6 and included 4.1.6 & 4.1.7 Amended 4.2 Responsibilities, deleted previous 4.2.3 Amended 4.4 Fixing of Signs, deleted previous 4.4.2 & 4.4.3 Amended 4.5 Maintenance of Signs, deleted previous 4.5.1 Included 4.6 Colour Coding and Demarcation Included 4.8 Pipe Colour Coding Included 4.9 Identification of Gas Cylinders Included 4.10 Informatory Notices.
			Annex A	Amended Name and Content.
			Annex B	Amended Content and Added in Examples of Signs.
March 2006	0			Document approved New Document Format, inline with Corporate Identity Updated References, Section 3.3 The following sections of the text were revised: Section 2.1.2 /3/4/6 Section 2.2.3 / 2.3./ 2.4.3./ 2.5 Deleted Annex C Included Impact Assessment (Annex C).
Oct 2001	0			This standard supersedes Element 2.50 in SCSAMAAE4.

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Acceptance

This document has been seen and accepted by:	
Name	Designation
L Mthombeni	Business Performance – General Manager (Dx)
A Stramrood	Divisional Risk Manager (Dx)
M Thanjekwayo	Risk Management Study Committee (Chairperson)
I Khumalo	Safety Risk Co-ordinator – Central Region

This Standard shall apply throughout Eskom Distribution.

Development team

List of people involved in the development of the document:

Bernie Kriel	Fanie van Jaarsveld
Frans Lötter	Ingrid Khumalo
Paul Diedericks	Maniel Lakhan
Steve Delport	Ncumisa Mntonga
Mxolisi Thanjekwayo	

Keywords

Colour Coding, Demarcation, Notices, Symbolic Safety signs

Bibliography

Not Applicable.

1 Scope

This standard is developed to ensure that there is a common understanding, use and application of symbolic safety signs, colour coding and floor demarcation within the Distribution Division.

All colour codes in a workplace should be standardised to reflect the same meaning throughout. This method eliminates the risk of workers becoming confused whilst in the confines of the workplace.

2 Normative references

Parties using this document shall apply the most recent edition of the documents listed below:

SANS 10140-1: Identification Colour Marking Part 1: General

SANS 10140-2: Identification Colour Marking Part 2: Identification of Hazards and Equipment in Work Situations

SANS 10140-3: Identification Colour Marking Part 3: Contents of Pipelines

SANS 10140-4: Identification Colour Marking Part 4: Contents of Taps and Valves in Laboratories

SANS 10140-5: Identification Colour Marking Part 5: Coding of Containers for Carrying Lubricants and Associated Fluids

SANS 1091: National Colour Standards

SANS 1186-1: Symbolic Safety Signs Part 1: Standard Signs and General Requirements

SANS 1186-2: Symbolic Safety Signs Part 2: Self-Luminous (Radioluminescent) Signs

SANS 1186-3: Symbolic Safety Signs Part 3: Internally Illuminated Signs

SANS 1186-4: Symbolic Safety Signs Part 5: Photoluminescent Signs

3 Definitions and abbreviations

3.1 Definitions

Safety sign (symbolic safety sign): A sign that conveys a general safety message, by using a combination of colour and geometric shape and that, by the addition of a graphic symbol or text, conveys a particular safety message.

Warning sign: A safety sign that conveys a warning of a hazard/danger.

3.2 Abbreviations

Not applicable.

4 Requirements

4.1 General

4.1.1 Compliance with this standard will be monitored using the Environmental/Risk Audit System (RAS) and cross-reference will be made between this standard and the Environmental/Risk Audit System (RAS).

4.1.2 All signs and notices shall conform to the requirements of SANS 1186 in terms of standard signs, safety colours, geometric forms and dimensions.

4.1.3 In terms of identification regarding colour marking ensure that the colours used match the appropriate colours of SANS 10140 and 1091.

4.1.4 Only the necessary signs, as required by law, shall be displayed. These signs shall be SABS approved, not damaged or faded. Where a Department/Unit deem it appropriate, they are permitted to put up additional signs provided that the colouring of the sign/notice conforms.

4.1.5 A legend demonstrating the symbolic safety signs and colour coding used on the premises shall be developed and displayed. The legend shall have a white background and may vary in size depending on the number of items to display.

4.1.6 Pipe colour coding and floor demarcation shall be used throughout a Department/Unit with the exception but not limited to offices, quarters and complexes.

4.1.7 Where piping is colour coded, it is not necessary to colour code the entire pipe. Coding shall be as close to the source and receiving end as well as on either side of the pipe where they go through a wall/partition. Where there are long lengths of piping, then discretion shall be used as to where to additionally identify the contents of the pipe.

4.2 Responsibilities

4.2.1 The employer and/or his/her delegate shall be responsible for implementing this standard and for ensuring conformance thereto.

4.2.2 All employees shall be taught during induction training sessions the meaning of all safety signs and colour coding on site, as symbolic safety signs are a means of communicating instructions and warnings visually to ensure employee safety.

4.2.3 The responsible Health and Safety Representative's inspection report shall reflect the condition of the signs in the area inspected.

4.3 Positioning of Signs

4.3.1 A safety sign shall be positioned in the most conspicuous position available.

4.3.2 A safety sign shall be placed so that it does not create a hazard.

4.3.3 A safety sign shall be placed for maximum effectiveness i.e. where it can be seen readily and where it will provide optimum warning of the presence of a hazard/danger or the presence of rescue and fire fighting equipment.

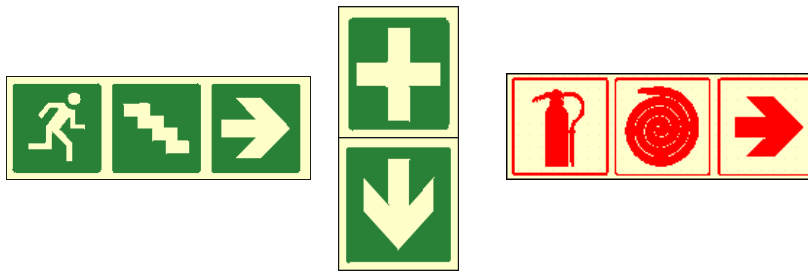
4.3.4 Where possible, a safety sign shall be placed at 90° to the passage or walkway, which it is to serve.

4.3.5 In buildings where shift work is carried out then the emergency exit and fire equipment signs shall be of the luminous type notwithstanding the availability of emergency lighting.

4.4 Fixing of Signs

4.4.1 In the case of safety signs that have low mechanical strength, the sign shall be attached to a flat surface or mounted on a plate or in a frame.

4.4.2 When placing/fixing signs the symbolic pictogram sign precedes the directional/location sign, for example:



4.5 Maintenance of Signs

4.5.1 Signs shall be regularly inspected and maintained.

4.5.2 Signs removed during construction work shall be replaced with temporary signs positioned as near as practicable to the original site.

4.5.3 Signs that have been so removed or that have been damaged shall be replaced as soon practicable.

4.5.4 Where relevant, care shall be taken to ensure that a sign or its support(s) are not impaired during repair work.

4.6 Colour Coding and Demarcation

It is important to be able to identify plant, moving machinery and other dangerous areas. To assist you in this identification, the colour-coding must be in accordance with the appropriate South African Bureau of Standards (SABS) specifications.

4.6.1 The following colours are of importance:

Red (SANS 1091 Colour Code A11)	=	Danger, fire equipment, stop buttons, floor demarcation under fire equipment
Yellow (SANS 1091 Colour Code B49) & Black	=	Caution & immovable objects in walkways
Green (SANS 1091 Colour Code E14)	=	First aid, safety equipment, exists, safe areas and starting devices
Orange (SANS 1091 Colour Code B26)	=	Electrical equipment, moving machinery, inside of machine guards, highly flammable waste, floor demarcation under mounted distribution boards
Blue (SANS 1091 Colour Code F29)	=	Demarcation of noise zones
White (SANS 1091 Colour Code G80)	=	Demarcation for stacking/storage
Yellow (SANS 1091 Colour Code B49)	=	Demarcation for walkways, operating handles and refuse bins/drums
Grey (SANS 1091 Colour Code G22)	=	General floor area (this is not mandatory)

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4.6.2 Floor Demarcation

Floor demarcation is done by marking the walking areas, stacking and storage, machinery and keep-clear areas.

The purpose of demarcation:

- under equipment and around machinery to ensure that such equipment/machine is always accessible;
- in storage and walkways to identify the respective areas for the purposes intended.

4.6.2.1 Demarcation Colours

4.6.2.1.1 Colours for floor demarcation line areas are as per para 4.6.1 above.

4.6.2.1.2 All demarcation lines shall be 50 mm wide.

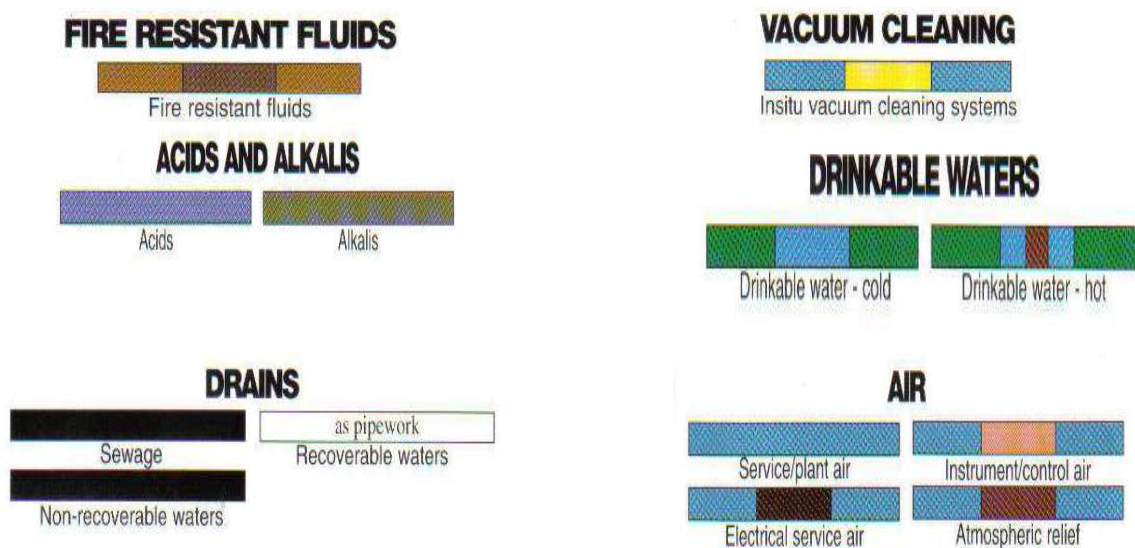
4.6.2.1.3 Demarcation under fire equipment and distribution boards shall be 450 mm wide and covering the entire length of the equipment (outside measurement) plus 50 mm on either side. Where distribution boards are ground mounted then only demarcation lines are required. These demarcations shall be outlined with a yellow demarcation line.

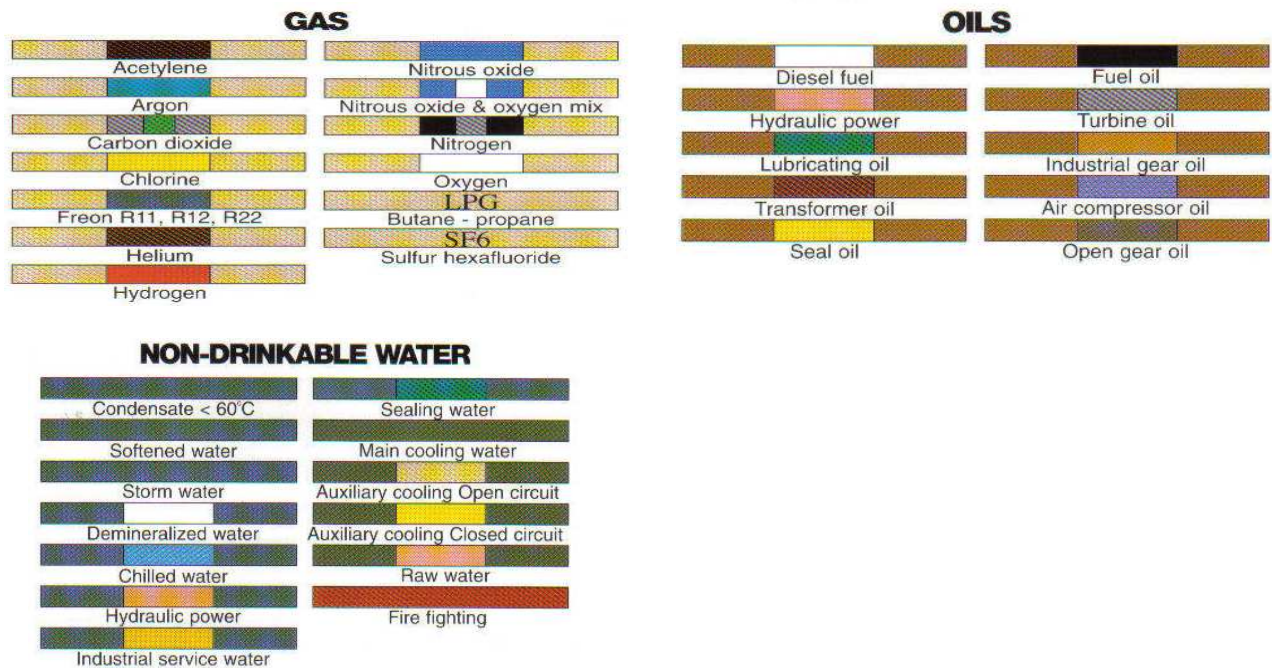
4.6.2.1.4 Stacking/Storage areas shall be demarcated with a white demarcation line and shall be surrounded by a yellow demarcation line which will indicate a no stacking area on the outside of the white demarcation line.

4.6.2.1.5 Noise zones shall be demarcated around the noise to a distance where the zone is no longer deemed to be a noise zone. Where workshops have numerous noisy machines then the ideal would be to demarcate all entrances to the zone.

4.7 Pipe Colour Coding

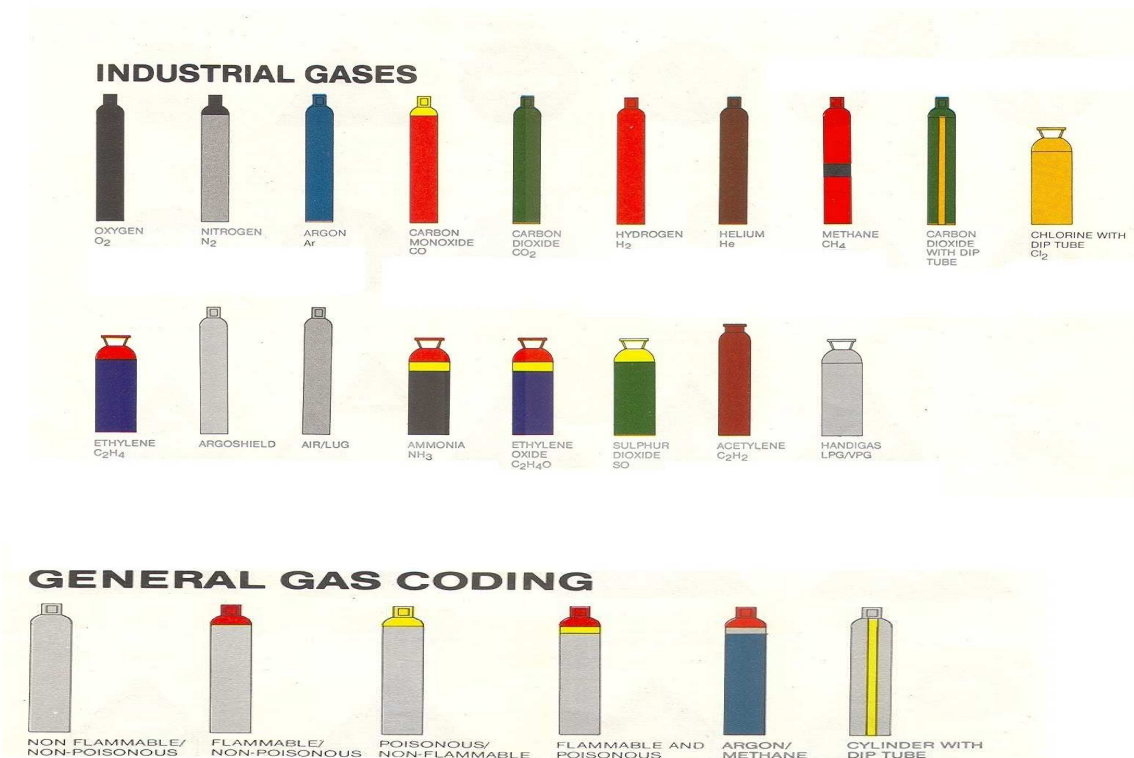
This standard colour coding is to be used at individual work units after completion of a risk analysis.





4.8 Identification of Gas Cylinders

All gas cylinders must be colour coded in accordance with the following South African Bureau of Standards (SABS) specifications.



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4.9 Informatory Notices

The colour coding of the notices must correspond with the colour coding of the symbolic safety sign. In addition to the symbolic sign explanatory information appears below the symbol.



**CARRYING OF LONG
MATERIAL
PROHIBITED**



**USE OF COMPRESSED
AIR TO DUST BODY
PROHIBITED**



**SUSPENDED
LOADS
HAZARD**



**ELECTRIC
SHOCK
HAZARD**

Annex A - Classification of Safety Signs/Notices

There are four basic categories of safety signs:

Prohibitory signs

These signs indicate that certain behaviour is prohibited or must stop immediately, for example, smoking in a "No Smoking" area. The signs are formed by a red circle with a red diagonal bar running from top left to bottom right of the circle, on a white background.

Warning/Caution signs

These are signs, which give warning or notice of a hazard. The signs are black outlined triangles filled in by the safety colour – yellow. The symbol or text is in black. The combination of black and yellow identifies the need for CAUTION.

Mandatory signs

These signs indicate that a specific course of action is required, for example, EYE PROTECTION MUST BE WORN. The safety colour is blue with the symbol or text in white. The sign is circular in shape.

Information signs

These signs provide information about safe conditions. The signs are square in shape, coloured green with white text or symbol. The safety colour green is associated with GO.

Annex B- General Meaning of Safety Colours

Meaning or Purpose	Safety Colour	Examples of Use	Contrasting Colour (if required)	Symbol
Prohibitory Signs Stop	Red	STOP signs; prohibition signs; identification of emergency shutdown devices.	White	Black
Warning/Caution Signs Risk of danger	Yellow	Warning signs, e.g. electric current on, harmful vapours, obstacle ahead, scaffold incomplete, asbestos.	Black	Black
Mandatory Signs Action	Blue	Obligation to wear personal protective equipment, e.g. eye protection; report damage immediately; keep out; switch off machine when not in use.	White	White
Information Signs Safe Condition	Green	Identification of location of first aid equipment, safety showers, emergency escape routes.	White	White

For examples of Signs see next page.

Annex B
(continued)

General Meaning of Safety Colours

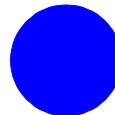
Black (triangle) on
yellow background - = **Warning signs**
Black pictogram



Red (round) on white = **Prohibitory
signs**
background -
Black pictogram



White pictogram = **Mandatory
signs**
on blue (round)
background



White pictogram on = **Information,
green (square) general signs**
background



Red (square) on = **Information,
white background - fire fighting
Red pictogram signs**



Annex C - Impact assessment (Normative)

Impact assessment form to be completed for all documents.

1 Guidelines

- All comments must be completed.
- Motivate why items are N/A (not applicable)
- Indicate actions to be taken, persons or organisations responsible for actions and deadline for action.
- Change control committees to discuss the impact assessment, and if necessary give feedback to the compiler of any omissions or errors.

2 Critical points

2.1 Importance of this document. E.g. is implementation required due to safety deficiencies, statutory requirements, technology changes, document revisions, improved service quality, improved service performance, optimised costs.

Comment: Adherence to Legal Requirements.

2.2 If the document to be released impacts on statutory or legal compliance - this need to be very clearly stated and so highlighted.

Comment: Ensures adherence/ supports legal requirements.

2.3 Impact on stock holding and depletion of existing stock prior to switch over.

Comment: N/A

2.4 When will new stock be available?

Comment: N/A

2.5 Has the interchangeability of the product or item been verified - i.e. when it fails is a straight swap possible with a competitor's product?

Comment: N/A

2.6 Identify and provide details of other critical (items required for the successful implementation of this document) points to be considered in the implementation of this document.

Comment: N/A

2.7 Provide details of any comments made by the Regions regarding the implementation of this document.

Comment: (N/A during commenting phase)

Annex C
(continued)

3 Implementation timeframe

3.1 Time period for implementation of requirements.

Comment: Immediate after TESCO Approval

3.2 Deadline for changeover to new item and personnel to be informed of DX wide change-over.

Comment: Ongoing

4 Buyers Guide and Power Office

4.1 Does the Buyers Guide or Buyers List need updating?

Comment: N/A

4.2 What Buyer's Guides or items have been created?

Comment: N/A

4.3 List all assembly drawing changes that have been revised in conjunction with this document.

Comment: N/A

4.4 If the implementation of this document requires assessment by CAP, provide details under 5 N/A

4.5 Which Power Office packages have been created, modified or removed?

Comment: N/A

5 CAP / LAP Pre-Qualification Process related impacts

5.1 Is an ad-hoc re-evaluation of all currently accepted suppliers required as a result of implementation of this document?

Comment: NO

5.2 If NO, provide motivation for issuing this specification before Acceptance Cycle Expiry date.

Comment: This is a standard and not a specification.

5.3 Are ALL suppliers (currently accepted per LAP), aware of the nature of changes contained in this document?

Comment: N/A

Annex C

(continued)

5.4 Is implementation of the provisions of this document required during the current supplier qualification period?

Comment: No

5.5 If Yes to 5.4, what date has been set for all currently accepted suppliers to comply fully?

Comment: N/A

5.6 If Yes to 5.4, have all currently accepted suppliers been sent a prior formal notification informing them of Eskom's expectations, including the implementation date deadline?

Comment: N/A

5.7 Can the changes made, potentially impact upon the purchase price of the material/equipment?

Comment: No

5.8 Material group(s) affected by specification: (Refer to Pre-Qualification invitation schedule for list of material groups)

Comment: N/A

6 Training or communication

6.1 State the level of training or communication required to implement this document. (E.g. none, communiqués, awareness training, practical / on job, module, etc.)

Comment: Induction Training

6.2 State designations of personnel that will require training.

Comment: All employees

6.3 Is the training material available? Identify person responsible for the development of training material.

Comment: Yes, the standard itself and Induction Booklet, Risk Training Specialist DRM

6.4 If applicable, provide details of training that will take place. (E.G. sponsor, costs, trainer, schedule of training, course material availability, training in erection / use of new equipment, maintenance training, etc).

Comment: Training needs analysis will determine the above.

6.5 Was Training & Development Section consulted w.r.t training requirements?

Comment: No.

Annex C
(continued)

7 Special tools, equipment, software

7.1 What special tools, equipment, software, etc will need to be purchased by the Region to effectively implement?

Comment: None

7.2 Are there stock numbers available for the new equipment?

Comment: N/A

7.3 What will be the costs of these special tools, equipment, software? N/A

8 Finances

8.1 What total costs would the Regions be required to incur in implementing this document? Identify all cost activities associated with implementation, e.g. labour, training, tooling, stock, obsolescence - Training needs analysis and Hazard Identification and Risk Assessment will determine the above.

Comment: This document to be forwarded to the RAS Administrator to identify impact on the RAS Audit templates.

Impact assessment completed by:

Name: Mxolisi Thanjekwayo and the Risk Management Work Group

Designation: Dx Group Risk Specialist