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MANAGEMENT**

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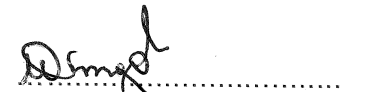
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1. Introduction

The purpose of this standard is to identify the basic requirements that should be met in order to achieve an effective fire prevention / protection programme within the Transmission division. This document addresses mainstream fire risks found in the Transmission environment.

2. Supporting Clauses

2.1 Scope

This standard addresses typical fire risks found in Transmission division. It also focuses on sections within statutory documents, which are of particular importance to fire safety.

2.1.1 Purpose

The purpose of this document is to identify the basic requirements that should be met in order to achieve an effective fire risk management programme.

2.1.2 Applicability

This document shall apply throughout Eskom Transmission division.

2.2 Normative/Informative References

2.2.1 Normative

- Occupational Health and Safety Act, Act 85 of 1993
- National Building Regulations and Building Standards Act (Act No 103 of 1977).
- SANS 1110400 - The application of the National Building Regulations.
- National Veld and Forest Fire Act (Act 101 of 1998)
- SANS 0105, Part 1 - The classification use and maintenance of fire fighting appliances.
- SANS 10108 - The classification of hazardous locations and the selection of electrical apparatus for use in such locations
- SANS 0229 - Packaging of dangerous goods for road and rail transportation in South Africa
- SANS 1087; Part 7 - Consumer Liquefied Petroleum Gas cylinder Installations.
- SANS 0228 - The identification and classification of dangerous substances and goods. International
- Maritime Dangerous Goods Code
- SANS 1186 - Symbolic safety signs
- SANS 1253 - Fire door assemblies
- SANS 1475; Part 1 - The production of reconditioned fire fighting equipment

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2.2.2 Informative

- Fire Protection Association, Bulletin 16 - Storage of gas cylinders.
- Fire Protection Association, Bulletin 37 - Flammable liquid stores.
- TST41-224 - Passive Fire Protection for oil-filled equipment in High Voltage Yards.
- TGL41-73 - Guideline for the reduction of fire related line faults using advanced fire information system (AFIS)
- TGL41-336 - Fire Protection Association Guideline

2.3 Definitions

None

2.4 Abbreviations

BU: Business Unit

SANS: South African National Standards

FPASA: Fire Protection Association of South Africa

NFPA: National Fire Protection Association

2.5 Roles and Responsibilities

This document shall be applied to the entire Eskom Transmission division.

2.6 Implementation Date

The implementation date is 1st November 2007

2.7 Process for Monitoring

The requirements contained in this document shall be monitored through audits as arranged by the Business Unit (BU) and Corporate Technical Audit Division (CTAD).

2.8 Related / Supporting Documents

None

3. Document Content

3.1 Assignment of Responsibility

3.1.1 The responsibility for Fire Risk management lies with the Business Unit Manager.

3.1.2 Co-ordination of Fire Risk management for the Transmission Group shall be assigned, within the Risk Management function, to a person who:

- has the ability to negotiate with the Group Managers, Corporate Sustainability (SHE) as well as Fire Prevention Association and local authorities at Town Clerk level,

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- has access to and regular contact with the Groups' top management team,
- can identify and evaluate risks and make appropriate recommendations in terms of the control and financing of risks,
- has knowledge of statutory and Eskom requirements pertaining to fire risk management and is aware of all SANS documents associated with the subject,
- is preferably at middle management level.

3.2 Fire Safety of Employees

3.2.1 Occupational Health and Safety Act (Act No 85 of 1993)

The above Act is a statutory document and must be complied with. The following sections and regulations of the Act are specifically mentioned in this standard because they are of particular importance in terms of the fire safety of employees:

- **Section 8: General Duties of Employers to their Employees**
This states that the employer must provide a working environment that is safe and without risk.
- **Section 13: Duty to Inform**
The employer must ensure that every employee is conversant with the hazards attached to his/her work as well as the precautionary measures that must be taken.
- **Section 14: General Duties of Employees at Work**
This generally states that the employee will take reasonable care for the health and safety of himself/herself and other persons, obey health and safety rules, report unsafe conditions, incidents and injuries.
- **Section 15: Duty not to Interfere with or Misuse Things**
No person must interfere with or misuse anything provided in the interest of health and safety. (The misuse of fire hose reels and fire extinguishers are typical examples).
- **Section 17: Health and Safety Representatives**
Every employer who has more than 20 employees must appoint a health and safety representative. Offices must have at least one health and safety representative for every 100 employees or part thereof. Any other workplace must have at least one representative for every 50 employees or part thereof.
- **Section 18 Functions of Health and Safety Representatives**
This deals with the functions that the health and safety representative has to perform such as inspections identify hazards; participate in health and safety meetings.
- **Section 19: Health and Safety Committees**
Where two or more health and safety representatives have been appointed for a workplace, the employer must establish one or more Health and Safety committees, who will meet at least once every three months.

3.2.2 Environmental Regulations for Workplaces

- **Section 19: Fire Precautions and Means of Egress**
This deals with the safety of people by providing a safe egress from a workplace. Section 19 should be read in conjunction with SANS 10400, "*The Application of the National Building Regulations*", Part TT17 to TT30 which deals with escape routes in much more detail.

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3.6.1.1 In addition to inspections carried out by the health and safety representative, the local fire brigade shall be formally requested (through the Town Clerk if necessary) to carry out an inspection of the premises once a year. Their inspection findings must be in writing.

Note:

Even if the employer only rents the building, the employer still has the responsibility under section 8 of the Occupational Health and Safety Act, to ensure the fire safety of employees.

3.6.1.2 A written record shall be kept of inspections, maintenance of fire protection systems and equipment, follow-up actions concerning shortcomings and evacuation exercises.

3.7 Transmission Substations

3.7.1 Eskom Standard

All new transmission substations (i.e. 220kV and above) shall comply with the Eskom standard, "Passive Fire Protection for Oil-Filled Equipment in High Voltage Yards", Ref.: TST41-224

3.7.2 Existing Substations

The provision of passive fire protection at existing transmission substations will be treated on merit.

3.7.3 Oil Holding Dams

Substations where oil holding dams have been provided shall make provision in their maintenance schedules to clean out the dams on an annual basis.

3.7.4 Fire Extinguishers

3.7.4.1 New Transmission Substations

The following fire extinguishers shall be provided for all new transmission substations and shall be part of the project contract:

High Voltage Yards with Major Oil-Filled Equipment –

- A minimum mass rating of 100kg dry chemical powder wheeled fire extinguisher(s). The quantity of wheeled fire extinguishers will depend on the layout of the high voltage yard. As a guide, one wheeled fire extinguisher should be provided for every two major transformers/reactors. Wheeled fire extinguishers should be located approximately 20m from major oil-filled equipment.
- Control Rooms/Accommodation - 1 X 6,8kg (minimum mass rating) Co₂ fire extinguisher per 200m² of floor area or part thereof.
- Offices/Guardhouse - 1 X 4,5kg chemical powder fire extinguisher per 200m² of floor area or part thereof.
- Workshops/Stores - 1 X 9kg chemical powder fire extinguisher per 400m² of floor area or part thereof.
- Battery Rooms - 1 x 9kg chemical powder fire extinguisher.

3.7.4.2 Existing Transmission Substations

Where any wheeled fire extinguisher is provided at an existing substation and the mass rating of such fire extinguisher is less than 100kg, the unit should remain in service and only replaced with a larger unit once it has reached the end of its lifespan.

3.7.4.3 Installation of Fire Extinguishers

Portable hand-held fire extinguishers shall be installed in accordance with SANS 0105 and signage

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posted according to SANS 1186.

3.7.4.4 Protection of Fire Extinguishers

Provision shall be made to protect fire extinguishers from environmental conditions.

3.8 Control Room Building

3.8.1 A fire wall with a minimum fire rating of two hours shall be provided between rooms of different occupancies e.g. office and relay room.

3.8.2 Doors in fire walls shall comply with SANS 1253, "*Fire Door Assemblies*".

3.8.3 Cable and other penetrations through fire walls shall be sealed with a material that will give the same fire rating as the fire wall.

3.8.4 The travel distance to an escape door shall not be more than 45m.

3.8.5 When the travel distance to an escape door is less than 45m but there is a danger of the route to the door becoming inaccessible because of a fire or explosion involving equipment in that room, an additional escape door shall be provided. The escape doors should be as far apart as possible from each other.

3.9 Fire Brigade Protection of Substations

3.9.1 Where a transmission substation with major oil-filled equipment in the high voltage yard does not fall under the jurisdiction of a fire brigade, the nearest fire brigade to the substation shall be identified.

3.9.2 Where it is feasible to enter into an agreement with the nearest fire brigade for protection of the substation, this must be done. The agreement can be verbal but preferably written. Criteria such as the fire brigade's distance from the substation should however be considered to determine whether it is feasible to enter into such an agreement.

3.9.3 Any fire brigade who will be required to respond to a transmission substation, whether this is because the substation is in their area or as per agreement, firemen from that fire brigade shall be invited to visit the substation. This shall be done once every two years.

3.9.4 A written pre-fire plan to facilitate fire fighting and reduce the possibility of injury to firemen shall be drawn up in conjunction with the relevant fire brigade and the responsible Supervisor or engineering Assistant for the substation.

3.9.5 The pre-fire plan shall, as a minimum, address the following:

- name and location of substation (preferably include a map),
- name of supervisor, Engineering Assistant and telephone numbers,
- other relevant Eskom emergency telephone numbers,
- access control, details of what the fire brigade should do when they arrive on site, particularly when the substation is unattended,
- when will it be safe to commence fire fighting,
- who will give authorisation to start with fire fighting,
- precautions the fire brigade should take during a fire in the high voltage yard,
- nearest water supply that can be used for fire fighting (if any),
- oil content of transformers,
- any other aspect that the fire brigade should be aware of that will facilitate fire fighting or reduce the possibility of injury to firemen.

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3.9.6 A copy of the pre-fire plan shall be kept by the fire brigade as well as at the substation. The emergency telephone list shall be checked & updated every three months.

3.9.7 Zero Control shall be made aware of which fire brigades will respond to what substations. The emergency telephone numbers at Zero Control shall also be checked & updated every three months.

3.10 Grass, Veld and Forest fires

The National Veld & Forest Fire Act (101 of 1998) has placed some additional responsibilities on line management, as custodians of property / land. Personnel should become familiar with the provisions of this legislation, the following issues are specifically tabled –

3.10.1 The objectives and requirements as defined within the National Veld & Forest Fire Act are to be actively pursued and supported. Specifically those relating to participating in the formation and operation of Fire Protection Associations, Chapter 2

3.10.2 The responsibilities (including any actions necessary) spelled out in Chapter 4 - Veldfire prevention Through Firebreaks also need to be addressed. This could entail the co-operation from farmers or land owners in the area, even if there is no formal Fire Protection Association in place.

3.11 General Storage Yards

3.11.1 Where practicable, combustible items such as cable reels should not be stored under power lines.

3.11.2 Combustible items to be stored separate from non-combustible items.

3.11.3 Grass and weeds must be kept clear from storage yards and a fire break of at least 8m provided around the perimeter of the yard.

3.11.4 Fire fighting equipment must be provided in relation to the risk. Advice should be obtained from the local fire brigade where applicable.

3.11.5 Good housekeeping to be maintained at all times.

3.11.6 Depending on the type of materials being stored, it may be necessary to have "Smoking Prohibited" signs in specific areas.

3.11.7 Perimeter of premises to be walled or fenced.

3.12 Storage of Flammable Liquids

3.12.1 Incidental Storage

The quantity of flammable liquids (i.e. liquids having a flashpoint of 55 °C and below) that may be located outside a flammable liquid store shall not exceed;

- a supply for one day,
- 40 litres of any liquid having a flashpoint up to but not including 23 °C e.g. petrol, methylated spirits, benzene,
- 220 litres of any liquid having a flash point between 23 °C and 55 °C inclusive of e.g. jet fuel, turpentine, thinners.

Note: Approved metal Jerri cans, steel drums or safety cans should be used for the casual transportation of flammable liquids.

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3.12.2 Outdoor Flammable Liquid Stores

3.12.2.1 An outdoor flammable liquids store must be:

- located in the open at ground level,
- at least 15m from important buildings, equipment, drains and other combustibles,
- security fenced (2,5m high wire or diamond mesh),
- matching gate, shaded from the sun (if possible),
- surrounded by a bund wall sufficient to contain the total content of the largest container stored plus 10%,
- constructed so that the floor is level, liquid tight and non-combustible,
- kept clear of weeds, paper, waste and other combustible material to a distance of 8m from the store,
- protected against unauthorized entry and accidental damage by vehicles,
- only used for the storage of flammable and combustible liquids,
- provided with appropriate signs i.e. smoking prohibited, fire and open flames prohibited, no entry to unauthorized persons,
- provided with at least 1 X 9kg chemical powder fire extinguisher mounted in a weather proof housing external to the store,
- preferably not provided with electrical fittings but if such fittings are necessary, consideration given to the SANS code - 10108, "*The classification of hazardous locations and the selection of electrical apparatus for use in such locations*", provision of special equipment determined by site specific conditions.

3.12.3 Fire Resistant Flammable Liquid Stores

Stores less than 15m from important buildings/equipment or constructed as part of building used for other purposes, shall comply with the following:

- Location - ground level
- Fire Resistance of Walls, Floor and Ceiling - minimum fire resistance rating of 2 hours (e.g. 110mm thick unplastered brick or 150mm class 2 aggregate concrete),
- cable or any other penetrations through walls, floor or ceiling to be sealed with a 2 hour fire rated material,
- Doors - fire resistance rating of 2 hours (class B fire door), to open outside, two doors if floor area of store exceeds 20m², to be kept locked when store not in use.

Note:

If second door provided, fit with approved lock so that it can be opened from inside.

- Windows - Allowed in external walls only, non-open able, metal frames, wire woven glass not exceeding 450mm X 450mm.
- Floor – liquid-tight, preferably concrete, recess below door threshold or provide a raised door sill or ramp (minimum of 10cm high) to contain total content of liquid stored plus 10%.
- Natural Cross Flow Ventilation - Store must have two external walls opposite each other, air bricks to be fitted in external wall at ceiling level and between 10cm and 30cm above floor level, air bricks to be Terra Cotta with non-corrodible wire mesh not exceeding 600 micrometers, spacing of air bricks usually 540mm X 450mm apart but must provide opening of 0.15m² per 5m² of floor area.
- Mechanical Ventilation - Where natural cross flow ventilation cannot be provided, install an exhaust fan capable of 30 air changes per hour, fan to be non-ferrous and non-sparking, wall opposite fan to have row air bricks, (Terra Cotta with wire mesh not exceeding 600 micrometers), at threshold height and spaced 225mm apart; fan must exhaust to external of building; if fan exhausts into other work areas, an external duct to be provided terminating at least 1m above roof height and, duct to be enclosed with 110mm brick or material having 2 hour fire resistance rating. Duct must not have any sharp bends.
- Electrical Fittings - All electrical fittings to comply with SANS code 10108, "*The classification of hazardous locations and the selection of apparatus for use in such locations*."

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- Signs to be provided - smoking prohibited, fire and open flames prohibited no entry to unauthorized persons, sign indicating quantity / inventory of liquid in store.
- Fire Protection - 1 X 9kg chemical powder fire extinguisher (on wall outside store), keep extinguisher in weather proof housing.

3.13 Storage of Oil

3.13.1 Classification

Oil is classified as a combustible liquid which means that it has a flash point above 61 °C. Unlike flammable liquids, combustible liquids e.g. transformer oil, lubricating oil and hydraulic fluids, must be heated to give off sufficient vapour to ignite. Combustible liquids are less hazardous than flammable liquids.

3.13.2 Storage of Oil-Filled Drums

3.13.2.1 An outdoor oil storage area must be: located in the open and at ground level, at least 15m from important buildings/equipment,

Note:

Where the above distance cannot be achieved, a fire wall at least 1m higher than the oil drums must be provided between the drums and important buildings/equipment.

- located or provision made so that spilled oil, irrespective of quantity, cannot spread to buildings, equipment or other storage yards,
- kept clear of weeds, paper, waste and other combustible material to a distance of 8m from storage area,
- provided with at least 1 x 9kg chemical powder fire extinguisher mounted in a weather proof housing near the storage area,
- only used for storage of oil or other combustible liquids,
- located where there is minimum chance of accidental damage from vehicles.

3.13.2.2 Indoor storage of oil: Oil may be stored in a building - provided that:

- the building is constructed of non-combustible material,
- it is a stand alone building solely used for the storage of oil or other combustible liquids,
- where the building used for storing oil is less than 15m from an important building or equipment, the wall of the oil store facing the building or equipment shall be a solid brick or concrete wall with no openings,
- provision is made to contain oil spillages to within the building,
- at least 1 x 9kg chemical powder fire extinguisher is mounted in weather proof housing outside the building,
- flammable liquids such as petrol shall not be kept in the building.

3.13.3 Oil Stored in Buildings used for other purposes

3.13.3.1 Incidental Storage

- Not more than 220 litres of oil or for that matter, any other combustible liquid shall be kept in a building or workplace used for other purposes unless the area in which the liquid is kept, complies with the requirements for an oil store.

3.13.3.2 Requirements for an Oil Store

- the store must be at ground level, any wall between the store and the rest of a building which the store adjoins, must be a fire wall with a minimum fire resistant rating of 2 hours,

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- a fire wall must be constructed to the underside of a non-combustible roof cover or a 2 hour fire resistant ceiling,
- any door opening in the above wall shall be fitted with a fire door having a fire resistant rating of 2 hours. (no other opening permitted),
- the floor of the room must be non-combustible and liquid tight,
- a sill or ramp (minimum height of 10cm) to be provided at the door communicating with the rest of the building,
- in addition to the above, provision must be made to contain spillage to the room in which the liquid is kept or stored,
- combustible materials such as rags and sawdust must not be kept in the store. A non-combustible oil absorbent material such as "Drizit" must be available for oil spills and may be kept in the store,
- flammable liquids such as petrol, paraffin, thinners, may not be kept in an oil store,
- provide 1 X 9kg chemical powder fire extinguisher on wall outside store,
- the following signs to be provided
 - Smoking prohibited
 - Fire and open flames prohibited
 - No entry to unauthorized person
 - Oil store
 - Maximum quantity of liquid stored

Note:

Heating oil to above its flash point may create a hazardous atmosphere. Where there is a possibility of this happening during the normal storage of oil, the ventilation will have to comply with items appearing in 11.3 of this standard and electrical fittings must comply with SANS 10108.

3.14 Storage of Industrial Gas Cylinders

Should the requirements for gas in compressed gas cylinders exceed an aggregate of 45 litres capacity, of all types of compressed gas cylinders, it is recommended that a proper gas store facility be provided, as follows –

3.14.1 Gas Store

An industrial gas store shall comply with the following:

- to be at ground level,
- outdoors,
- well ventilated,
- enclose with heavy gauge wire mesh (min 2m high),
- concrete floor,
- non-combustible roof (min 2,5m above floor level),
- if store exceeds 10m², provide additional escape gate with sliding bolt lock,
- gates to open outwards,
- store to be at least 10m from buildings or boundary line,
- kept clear of weeds, paper, waste and other combustible material to a distance of 8m from store,
- no other materials / combustibles to be kept in store,
- provided with appropriate signs and chart i.e. cylinder colour code chart,
- smoking prohibited, fire and open flames prohibited, no unauthorized entry,
- locate store to reduce possibility of damage by vehicles,
- where necessary, provide barriers so that vehicles cannot come closer than 5m from the store,
- electrical fittings to comply with, "*The classification of hazardous locations and selection of electrical apparatus for use in such locations*", SANS code 10108,
- at least 2 X 9kg chemical powder fire extinguishers to be located at entrance to store,
- extinguishers to be mounted and kept in weather proof housing,
- keep store locked when not in use,
- full cylinders must be kept apart from empty cylinders,

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- empty cylinders to be marked with letters "MT",
- cylinders to be stored upright (use special stands/racks),
- secure cylinders in upright position (chain or other means),
- where provision exists, fit protecting caps over valves,
- store cylinders in rows with aisles between for easy removal in event of fire.

3.14.2 Responsible Person

A responsible person should be appointed to take charge of the store keys as well as the general management of the store.

3.15 LP Gas supplies for Park Homes

3.15.1 To comply with SANS 087: Part 2, "Installations in mobile units and small non-permanent buildings".

3.15.2 An LP gas cylinder exceeding 45 litres (18kg) shall not be installed inside a park-home.

3.15.3 An LP gas cylinder not exceeding 45 litres may be located inside a park-home but should preferably also be installed outside.

3.16 Portable Fire Extinguishers

3.16.1 Classes of Fire as per SANS 0105

3.16.1.1 Fires are divided into the following classes:-

Class A: Ordinary combustibles e.g. wood, paper, plastics.

Class AC: Ordinary combustibles burning in the presence of electricity.

Class B: Flammable liquids and gases.

Class BC: Flammable liquids and gases burning in the presence of electricity.

Class ABC: Ordinary combustibles, flammable liquids and gases burning in the presence of electricity.

Class D: Fires involving metals e.g. magnesium, aluminium.

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TABLE 1

**SUITABILITY OF VARIOUS TYPES OF FIRE EXTINGUISHERS
FOR DIFFERENT CLASSES OF FIRE**

TYPE OF PORTABLE FIRE EXTINGUISHER	SUITABILITY PER FIRE CLASSIFICATION					
	A	B	AC	BC	ABC	D
Water	MS	D	D	D	D	D
Foam						
▪ Protein & Synthetic	LS	S	D	D	D	D
▪ Fluoroprotein	LS	MS	D	D	D	D
▪ AFFF	U	LS	D	D	D	D
Dry Chemical Powder						
▪ Potassium Bicarbonate	U	MS	S	S	S	U
▪ Potassium Chloride	U	MS	S	S	S	U
▪ Sodium Bicarbonate	U	MS	S	S	S	U
Carbon Dioxide	U	LS	MS	MS	MS	D

MS = most suitable
S = suitable
LS = limited suitability
U = unsuitable
D = dangerous

3.16.1.2 As can be seen from Table 1, some fire extinguishers may be suitable for a specific class of fire and dangerous when used on other classes of fires. It is therefore important to install the correct fire extinguishers for the type of fire expected.

3.16.1.3 Where a fire extinguisher is suitable for a specific class of fire, this is normally indicated on the fire extinguisher by means of letters, A, B or C or a combination of two or more of these letters or only D. For example, a fire extinguisher with the letters ABC means that it is suitable for a fire involving ordinary combustibles, and flammable liquids in the presence of electricity.

3.16.2 Approved Fire Extinguishers

3.16.2.1 A portable hand-held fire extinguisher shall:

- as referenced in SANS 104000 (TT37.4) bear the mark of standardization as contemplated in section 14 of the Standards Act, 1982 (Act 30 of 1982) or,
- be clearly marked by the SANS to indicate that it has been evaluated by and is acceptable to the SANS.
- be installed, maintained and serviced in accordance with SANS 0150 and SANS 1475.

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3.16.3 Number of Portable Fire Extinguishers per Floor Area

Must comply with “*The Application of the National Building Regulations*”, SANS 10400, Section TT37.

3.16.3.1 Portable fire extinguishers shall be located as follows:

- in conspicuous positions,
- along normal paths of travel and near exits,
- on purpose made brackets or in purpose made cabinets,
- carrying handles not higher than 1,5m from the floor,
- identification labels clearly visible from direction of approach,
- identify positions of fire extinguishers according to SANS 1186.

3.16.3.2 Portable fire Extinguishers shall not be placed:

- in dead end areas (i.e. where access could present a risk to potential operator),
- behind doors,
- in cupboards (except purpose made cabinets),
- in deep recesses or in positions where they may cause obstruction to
- exit routes,
- over or close to heating appliances.

3.17 Hot Works

Adherence to statutory requirements relating to hot work must be ensured (see extract from OH & S act – General Safety Regulation, section 9). This standard requires that there shall be a Management Process to control hot work within the Eskom Groups.

Groups are responsible for addressing the Management and process to be employed within their area of operations and jurisdiction. Examples of typical administrative controls to manage hot work can be found referenced below and can be utilised as tabled or modified to address specific issues applicable within their work environments.

This must be disseminated further down to Business Unit levels and will require a different approach within each of the Group(s)/Business Units relative to their operations, manpower levels, buildings, equipment and assets.

Typical examples of Hot Work Process

SANS 0287 – Automatic Sprinkler Installations for Fire-Fighting Purposes,
Annex B – Precautions When Carrying Out Hot Work

SANS 1089 – The Petroleum Industry – Part 1
Annex C, Examples of Typical Work Permits

Examples of content and layout of Hot Work permits are contained in these informative documents and can be referred to, in support for development of in-house administrative control(s).

In addition the following information is tabled should the reader require further background in the development/implementation of a system/process to manage Hot Work in their work environment.

NFPA - An internationally acknowledged American based organisation, specifically addressing the development of fire prevention and protection codes and standards. As a point of reference, the NFPA provides for a comprehensive series of standards and codes relating to specific issues, industries, and interventions applicable to the prevention and protection against fire. Please contact Fire Risk Management for further information regarding the appropriate NFPA documentation (NFPA 51B) or any other queries regarding this reference information.

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5. Provide additional protective measures as necessary and available (e.g. temporary water supplies, additional manual fire fighting equipment).

A process of communication and information shall be defined (e-mail is preferred), of the above information included and implemented to ensure reporting of this information to Group Senior Management (Risk Management / Safety), Corporate Sustainability (SHE) and EIMS personnel as soon as such incidents occur, is in accordance with 32-95 (previously ESKPVABN9), *Reporting, Recording and Investigation of Incidents*.

On establishing there is a fire system impairment, BU's or departments having control over fire systems (or persons made responsible for such actions or activities) shall raise an e-mail (preferred) to the following Corporate sections,

In all cases –

- london.impairments@fmglobal.com
- Corporate Sustainability (SHE) : Senior Adviser FRM
- Eskom Insurance Management Services: Chief Executive Officer ESCAP

In addition for impairments within the following divisions, the following personnel or the appropriate proxy must be included in the notification.

For Generation

- Generation Safety & Assurance

For Transmission

- Transmission Risk Manager

For Distribution

- Distribution Risk Manager

Eskom Enterprises

- Eskom Enterprises Risk Manager

Eskom Finance

- Eskom Properties Manager

3.18 Exemption

3.18.1 An application for exemption from any requirement of this standard shall be made to the manager responsible for that BU in respect of which an exemption is required.

3.18.2 The manager shall issue an exemption after consideration of recommendations in each case by the Risk Control Manager, Corporate Sustainability (SHE).

3.18.3 From an administrative point of view, application shall in the first instance, be submitted directly to the Risk Control Manager, who shall then investigate the matter and submit the application, together with his recommendation(s), to the relevant manager.

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4. Authorisation

This document has been seen and accepted by:

Name	Designation
J. Machinjike	Manager Grids
J. Mashao	Manager Western Grid
S. Mazibuko	Manager North Western Grid
I. Fick	Manager Southern Grid
B. Chetty	Manager Eastern Grid (Acting)
J. Marabwa	Manager North Eastern Grid
C. Reddy	Manager Apollo
S. Matlala	Manager Northern Grid
R. Gamede	Manager Central Grid
W. Majola	Manager Transmission Services
T. Molefe	Manager Finance and Business Support
H. Mohabir	Manager Divisional Client Office (DCO)
T. Tsekeli	Manager Commercial
N. Kleynhans	Manager Protection, Measurement & Control
G. Bruce	Manager Technology and Information Management

5. Revisions

Date	Rev.	Remarks
1 st November 2007	0	Old Document. New numbering Replacing document TRMASAAL4

6. Development Team

ML Cresswell K Pillay

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