SAFETY

HEALTH

ENVIRONMENT

PLAN

-o0o-

DOCUMENT NO: PP-17
REVISION O/A0
JANUARY 2010

-o0o-

Status	Author	Agreed	Approved
For Implementation	P.J. Steenkamp	P.J. Steenkamp	

SHE POLICY STATEMENT

All Projects will be undertaken in such a way that they can be constructed and operated safely in an environmentally friendly and physically healthy atmosphere for the workers and the general public. It is part of eTesla fundamental value system that proven safety and environmental principles are applied to all phases of its business.

Every possible effort shall be made to assure that projects are carried out in accordance with all statutory and the client's regulations, respecting construction safety. The following basic principles apply:

- Zero tolerance for unsafe work practices
- An overall safety program is in place and is implemented for a site and project
- Safety and accident prevention program regulations are strictly adhered to
- Risk assessments are carried out before work starts
- All site activities are co-ordinated to ensure a safe and healthy work place
- The safety performance of contractors and their employees are carefully monitored

eTesla recognises that accident prevention and quality of working force are an essential part of its operations and requires all employees, contractors, sub contractors and their employees to actively participate in the Project Occupational Health and Safety Programs.

eTesla accepts the principle that the causes of accidents and occupational illness can be controlled and that the number of personal injuries can be minimised. To this end it adopts the principle of ZERO TOLERANCE for dangerous work place practices.

eTesla endorses the application of all statutory regulations and industry standards to its projects while recognising these as minimum acceptable standards.

eTesla will recognise safety performance in evaluating contractor and employee performance for future work.

eTesla considers that in the first instance safety on construction sites is the responsibility of individual workers. It will ensure, through its contracts, that appropriate and effective communication mechanisms exist to inform and train contractors and their workers concerning potential site specific dangers.

CONTENTS

1. INTRODUCTION 4
2. LEADERSHIP AND COMMITMENT 5
3. RESPONSIBILITY AND AUTHORITY 6
4. PLANNING & OBJECTIVES 7
5. PERFORMANCE MEASUREMENT AND REPORTING 8
6. HAZARD AND RISK MANAGEMENT 9
7. PLANT AND EQUIPMENT INTEGRITY 10
8. DESIGN AND CONSTRUCTION 11
9. TRAINING AND COMPETENCY 12
10. SAFE WORKING BEHAVIOUR AND EMPLOYEE PARTICIPATION 13
11. COMMUNICATION 14
12. INCIDENT/ACCIDENT MANAGEMENT 15
13. SAFE WORK PROCEDURES 16
14. OCCUPATIONAL HEALTH, HYGIENE AND REHABILITATION 17
15. LEGISLATIVE COMPLIANCE 18
16. CONTRACTOR ASSESSMENT AND MANAGEMENT 19
17. REVIEWS, AUDITS AND INSPECTIONS 20
18. EMERGENCY PREPAREDNESS AND RESPONSE 21
19. HAZARDOUS MATERIALS MANAGEMENT 22
20. MANAGEMENT OF CHANGE 23
21. SITE SPECIFIC SAFETY AND HEALTH PROGRAMS 24
22. SAFETY CLOSE OUT REPORT 25
23. SITE PROCEDURES AND FORMS 26
24. REFERENCE TO DETAILED SPECIFICATIONS 27

1. INTRODUCTION

Plan and its Purpose

This document outlines the safety elements that should be considered in the preparation of a Safety Management Plan for a Project. The Project Safety Management Plan is a subset of the Project Execution Plan. Details of the Scope of Work for the Project would normally be found in the Project Execution Plan. This Document outlines the elements essential to achieving completion of any Project with the highest possible standards of Occupational Health and Safety and meeting compliance with the eTesla Safety Management Standards.

Each Project must have a Project Safety Management Plan which includes each of the elements of this Plan and customizes the requirements of this Plan to the contract Scope Of Work. (The plan should define how safety will be managed on the Project).

Each Contractor is required to produce a Contract Safety Management Plan which includes each of the elements of this plan and customizes the requirements of this plan to the contract Scope Of Work. (The plan should define who the work will be carried out safely).

In some cases a bridging document may be necessary to consolidate the safety approach to be taken in the event of a difference between the two above mentioned plans.

Safety Management Plan to consider and define:

- scope of the plan;
- safety management principles to be used on the project;
- relationship with any existing client safety management system; and
- Safety, Health and Environment Goals, Commitments and Methodology to be used in the Project, to ensure the Project meets its Safety Commitments and Obligations.

2. LEADERSHIP AND COMMITMENT

Objectives: To ensure that managers and supervisors, by means of their actions, attitude, consistency and energy, provide a visible, pro-active and demonstrated commitment to safety, so as to sustain a culture where safety is a prime value that cannot be compromised.

eTesla is committed to achieving the highest attainable standards of performance in Occupational Health and Safety.

All clients, contractors and their staff involved on a Project are expected to share the same objective and commitment.

The Contractor's approach to safety must meet or exceed the client's expectations, while at all times ensuring legal compliance.

This section includes:

- Safety policy;
- a statement of commitment; and
- need for contractors and visitors to share the same commitment.

3. RESPONSIBILITY AND AUTHORITY

Objectives: To ensure that the responsibility and authority of all personnel, as they relate to safety, is defined, documented and understood.

- All individuals;
- client's representative;
- project manager;
- construction manager;
- project safety manager;
- project safety personnel;
- design personnel;
- construction supervision personnel;
- contractor's supervising personnel;
- contractor's workforce;
- project engineer;
- site visitor's; and
- other relevant personnel.

State relationship between client, principal contractor and contractors in respect to OH&S.

4. PLANNING & OBJECTIVES

Objectives: To ensure that a planned, systematic, measurable and achievable approach to managing safety is adopted for the project.

Set measurable safety objectives and targets for the project. Examples are as follows:

- Work injury frequency rates (WIFR);
- Zero LTI's ;
- Incident Frequency Rates (IFR);
- Performance measures, i.e. audits and hazard registers;
- Close out of corrective actions i.e. completion on time;
- Non repetition of incidents of similar nature on site so that workable short/medium/long term solutions are implemented etc.;
- Number of meetings to be held is met;
- Number of training sessions planned is met; and
- Behavioural safety audits.

5. PERFORMANCE MEASUREMENT AND REPORTING

Objectives: To ensure that a clear understanding of safety performance and trends, and their significance and implications, exists at all levels. And that performance measurement is utilized in the identification of adverse trends or situations, and in the development of continuous improvement and corrective action measures, as appropriate.

- Define key performance indicators;
- reporting systems to be used;
- arrangements for reporting safety, health and environmental performance;
- data and trend analysis; and
- communication of performance.

6. HAZARD AND RISK ASSESSMENT

Objectives: To ensure that hazards to people or equipment are identified, risks are assessed and the appropriate control measures, in accordance with the risk management Hierarchy of Controls, are implemented.

- Hazard identification, reporting and control;
- risk analysis and control;
- pre contract responsibilities;
- site access control;
- job safety analysis;
- major identified risks table, from project scope of work;
- dangerous goods and hazardous substances;
- hazard register; and
- incorporate hazard control into work method statements.

7. PLANT AND EQUIPMENT INTEGRITY

Objectives: To ensure that all facilities, plant and equipment are designed, constructed, and commissioned, so as to ensure the inherent safety and technical integrity of the facility.

- Does plant design data need documentation and forwarding to plant operators
- Maintenance, inspection, testing and calibration of site equipment;
- Inspection of new plant brought onto site.

8. DESIGN AND CONSTRUCTION

Objectives: To ensure that the identification and control of risks forms an integral part of the design process; and that construction, commissioning and decommissioning activities are conducted in accordance with the relevant requirements of these Standards.

- Compliance with legislation, standards, codes of practice;
- concept/preliminary hazard analysis;
- safety Case/Safety Report;
- concept risk analysis;
- design for safety;
- design review and verification;
- process and design documentation;
- hazard study methodology;
- eTesla critical safety requirements;
- risks and procedures; and
- work method statements, job safety analysis.

9. TRAINING AND COMPETENCY

Objectives: To ensure that all project personnel are appropriately trained and competent, so as to be able to carry out their work in a safe, competent and skilful manner.

- Induction program;
- skills training for all company personnel;
- skills training for contractor personnel;
- specific work activity training ;
- safe work procedure training;
- any local legislative training requirements;
- isolation, Permit to Work etc.;
- ongoing training;
- how often?;
- by whom?;
- records and contents;
- emergency/First Aid Training; and
- attach training matrix if applicable.

10. SAFE WORKING BEHAVIOUR AND EMPLOYEE PARTICIPATION

Objectives: To ensure that all personnel consistently practice, and are committed to, safe working behaviour and work practices; and that managers actively pursue and support the involvement and motivation of personnel in the development, execution and review of safety initiatives.

- Initiatives to promote safe behaviour ;
- reporting of safety concerns by employees and contractors;
- involvement of participation of personnel in workplace safety issues and programs; and
- corrective actions in the event of unsafe behaviour.

11. COMMUNICATION

Objectives: To ensure that safety matters are adequately communicated to all personnel, that opportunities are regularly provided for effective two-way communication, that effective cross-communication exists throughout the Project, and that systems are in place for the communication of safety matters to and from external parties.

- Project meetings;
- management group meetings/committees;
- site safety committee;
- site safety meetings
- Daily Safe Task Instructions
- toolbox meetings;
- issue resolution procedures;
- safety promotion methods; and
- meeting schedule.

12. INCIDENT/ACCIDENT MANAGEMENT

Objectives: To ensure that all accidents and incidents are identified, reported and investigated, and that the appropriate corrective action, aimed at preventing recurrence, is taken.

- Reporting requirements
- definitions;
- incident register;
- corrective action follow up, systems/procedures;
- statistical reporting - frequency, what is reported and to whom?
- performance reporting;
- rehabilitation and return to work plans; and
- attach incident/accident report form.

13. SAFE WORK PROCEDURES

Objectives: To ensure that all work activities (and working environment conditions) which have the potential to cause harm to people or damage to equipment on the project or within the surrounding community, are carried out in a safe manner.

- Applicability of legislation, regulations, codes of practice;
- all work activities and working environment conditions which have the potential to cause harm to people or damage to the environment should be identified, evaluated and assessed;
- Establishment of site rules and procedures;
- Setting up safe operating procedures/work instructions;
- Permit to work, etc.; and
- PPE

14. OCCUPATIONAL HEALTH, HYGIENE AND REHABILITATION

Objectives: To ensure that adequate occupational health, hygiene, security and workplace facilities are provided to all personnel and that the general health improvement of employees is encouraged.

- Identify, manage and control any particular onsite health hazards;
- first aid arrangements;
- related Acts, Regulations, Codes of Practice, ETesla requirements;
- any special on site tests required, noise, hearing, drugs and alcohol etc.;
- travel health, security;
- who will do tests? when? location? and
- effective workplace injury management, rehabilitation.

15. LEGISLATIVE COMPLIANCE

Objectives: To ensure that all eTesla sites comply with all laws, regulations, standards, codes, statutory licenses and other legislative requirements which apply to their operations, and exercise a duty of care with respect to personnel and the communities in which they operate.

- List all relevant acts, regulations, codes of practice, licensees etc.;
- Legal appointments
- compliance;
- amendments and changes;
- Duty of Care; and
- Due Diligence

16. CONTRACTOR ASSESSMENT AND MANAGEMENT

Objectives: To ensure that the contracting of services, and the purchase, hire or lease of equipment and materials does not cause harm to personnel, the public or to property; and that arrangements are in place to ensure the safety of visitors to sites.

- Pre-qualification criteria;
- contractor past performance;
- assessment of contractor's ability to carry out the work;
- monitoring of contractor's safety performance;
- safety requirements for any materials or plant to be used on site;
- project specification inclusions - Safety Management Plan requirements;
- Special condition of contract;
- nomination of principal contractor - OHS responsibilities;
- visitors induction, safety; and

17. REVIEWS, AUDITS AND INSPECTIONS

Objectives: To ensure the effective monitoring of the project's Safety Management System and safety performance, at all levels, by means of reviews, audits and inspections; and the application of corrective and preventative action to all identified deficiencies and non-compliance. Consider:

- Audit Plan. What systems will be used? Inspection schedule to what criteria?
- management reviews;
- workplace inspections;
- safety walks;
- critical safety audits;
- project reviews;
- evaluation of the Safety Management Plan, review and update;
- audit program - type and number?
- who will audit?
- how will the Project Safety Management Plan be audited? and
- intention to involve clients and contractors.

18. EMERGENCY PREPAREDNESS AND RESPONSE

Objectives: To ensure that in the event of an emergency, plans and capabilities are in place for dealing with such situations in a manner which has the priority to preserve the health and safety of people, protection of the environment and preservation of Anglo Platinum' capability and reputation. Consider:

- Identify possible crisis and emergency situations;
- Define responsibilities, names and contact numbers;
- Induction and ongoing training;
- Site evacuation plan;
- Specific procedures drawn up defining how Hatch personnel and contractors must act in evacuation i.e.(before hours/after hours);
- Evacuation procedures and evacuation points displayed in all offices, buildings & sites;
- Practice drills - when, how often?
- Co-ordination, internal and external;
- By whom? and
- Nominate external services contacts with phone numbers.

19. HAZARDOUS MATERIALS MANAGEMENT

Objectives: To ensure that purchasing, transport, storage, handling, use and disposal of hazardous materials in carried out in a safe manner and that actions are taken to minimize, as far as is practicable, the exposure of personnel to such materials. Consider:

- Legislation and codes of practice;
- The types and quantities of any dangerous goods or hazardous materials;
- Hazards associated with their use;
- Material Safety Data Sheets;
- Any PPE requirements; and
- Training.

20. MANAGEMENT OF CHANGE

Objectives: To ensure that changes are assessed for any potential safety risks, and that the appropriate action is taken to ensure existing safety performance levels are not compromised. Consider:

- Plant or equipment changes;
- modifications;
- changes to work methods;
- changes in design or construction approaches;
- site materials;
- Organisational structure changes; and
- changes - retraining.

21. SITE SPECIFIC SAFETY AND HEALTH PROGRAMS

Consider any specific site safety and health programs that may be introduced during the project:

- Minimum PPE;
- Drugs and alcohol;
- Top 10 hazards;
- Test before you Touch; etc.

22. SAFETY CLOSE OUT REPORT

A safety close out report will be required to pass on any learning’s?

23. SITE PROCEDURES AND FORMS

- What procedures and forms are to be used on the project
- List forms to be used.(Refer to Health and Safety documents for contractors)

24. REFERENCE TO DETAILED SPECIFICATIONS

Document	Rev./issue	Title and Publisher
		1. SABS Specifications
SABS 1083	1976	Aggregates from natural sources
SABS 82	1976	Bending dimension of bars for reinforced concrete
SABS 558	1973	Cast iron surface boxes and manhole and inspection covers and frames
SABS 1063		Earthing Rods, couplers and clamps
SABS 10240	1997	Hot dip (Galvanised) zinc coatings (In Part)
SABS ISO 1461	1999	Hot dip (Galvanised) zinc coatings (In Part)
SABS 135	1985	ISO Metric bolts, screws and nuts
SABS 675	1993	Zinc-coated fencing wire
SABS 677	1986	Non-pressure concrete pipes
SABS 626	1971	Portland blast furnace cement
SABS 471	1971	Portland cement
SABS 831	1971	Portland cement 15
SABS 986	1970	Pre-cast reinforced concrete culverts
SABS 1200	1986	Standard specification for Civil Engineering Construction
SABS 920	1985	Steel bars for concrete reinforcement
SABS 1186	1978	Symbolic safety sign
SABS 03		The protection of structures against lightning code of practice
SABS 1024	1974	Welded mesh for concrete reinforcing
		2. SABS Code of Practice
SABS 0144	1987	Detailing of steel reinforcement for concrete
SABS 0199		Earthing Rods, couplers and clamps
SABS 0198	1988	Installation of electric cables
SABS 0200		Neutral earthing in medium voltage industrial power systems
SABS 0157	1987	Quality Management systems

SABS 0400	1987	Standard Specification for the application of National building regulations
SABS 0100	1992	Structural use of concrete
SABS 0162	1993	The Structural use of steel
SABS 044	1963	Welding and Welding Symbols
SABS 0142	1987	Wiring of premises
		3. SABS Methods
SABS 863		Compressive strength of concrete
SABS 862		Slump of freshly mixed concrete
ESKPBAAD6		Environmental management policy
OPR 6204		Eskom Operating Regulations
DTOS 0071	0	Eskom Standard for Barricading
DTMG 0112		Guideline for the application of herbicides for weed eradication in substations
DTNG 0012		Guideline for the application of Herbicides for weed eradication in substations
ETP 023		Herbicide management policy
0.54/390	44	HV Yard Civil work - Standard Details
0.54/1790-1797	0	Label fixing detail
0.54/404	7	Label Types
SCSSCAAK3	0	Medium voltage indoor switchgear
SCSASAAA0	0	Passive and Active Fire Protection in Distribution Substation Yards
EVS 005	1	Quality requirements for quality related items and equipment
EVS 010		Quality requirements for quality related services
ESKSCAAA0	4	Specification for Outdoor, High Voltage Shunt Capacitor Installations
ESKASAA04	1996	Standard for Electric Protection and Fault Monitoring Equipment for Power Systems
ESKASAAN0	0	Standard for Labelling of High Voltage Equipment
D-DT-5074	0	National Standard Control Building, Sheets 1 to 7
D-FS-887	7	Substation Civil work details

TRMASAAJ7	1	Earthing of Transmission Line Towers
SCSSCAAD3	1	Specification of Large Power Transformers up to 132 kV, in the Rating Range of 2.5 MVA to 80 MVA
SCSASABK3	0	Generic Substation Design
SCSASABF3	0	Distributions Group's Specific Requirements for the Use of Furniture in Substation Buildings
SCSSCAAQ4	2	Distributions Group's Specific Requirements for the Wiring of Breakers and In-built Current Transformers
SCSASAAQ1	2	Quality Control Process for the Checking of Distribution Substation Construction Before Handing Over for Commercial Operation.
ESKASAAC2	1	Management of Polychlorinated Biphenyl's (PCB)
ESKADAAO3		Corporate Directive for the Management of Polychlorinated Biphenyl's (PCB)
SCSPVABM9	**0**	**Co-ordination of Safety on Capital Projects**
SCSASABK2	**0**	**Substation Earthing**
SCSPVABF3	**1**	**Occupational Health and Safety Requirements to be met by Contractors and Sub-Contractors Employed by Eskom.**
D-DT-5085		**Earthing Standard**
Name	**DATE**	**Environmental Management Plan for this project**
		4. General National Standards and Acts
Act no. 43	1983	Conservation of Agricultural Resources Act.
NRS 008	1991	Enclosures to Cable Termination in Air: For rated a.c. voltages of 7,2 kV and up to and including 36 kV
Act no. 73	1989	Environmental Conservation act.
Act no. 31	1963	Fencing Act.
Act no. 122	1984	Forest Act.
TRH14	1985	Guidelines for road construction materials
Act no. 63	1970	Mountain Catchment areas act.
Act no. 85	1993	Occupational health and safety act.
SAISC	1990	South African Steel Construction Handbook
NWP 3109		Standard drawing practice
TMH1	1986	Standard methods of testing road construction materials

CSRA	1987	Standard Specifications for Road and bridge works
TRH4	1985	Structural Design of interurban and rural road pavements
		5. Eskom New Works Standards
NWS 1017		Accident Prevention
NWS 1431	1	Civil and Building works (Substations)
NWS 1215		Design for Battery Rooms
NWS 1109	0	Earthing of Transmission Line Towers
NWS 1494	3	Fire prevention and protection of contractors and Eskom premises on Engineering sites
NWS 1060		Injury prevention and protection
NWS 1116		Lethal Electrified Fence System
NWS 1031		Programming and progress monitoring services required from design consultants
NWS 1032		Programming and progress monitoring services turnkey and management contracts or consultants
NWS 1814/C1		Quality assurance requirements for civil and building contracts
NWS 1058	4	Safety at construction sites: Requirements to be met by Contractors
NWS 1531		Specification for Civil and Building Works
NWS 1607	1	Specification for electrical installations in buildings and associated cabling
NWS 1605	2	Specification for Lamps and Luminaires
NWS 1404	0	Substation steelworks and microwave tower manufacturing and erection
NWS 1512	2	Transmission Line towers and line construction
		6. General Eskom Standards
CEMS 0040	0	Control and Cutting of trees and bush for lines
0.54/393	20	Earthing Standard
ESKPVAAL7	2	Environmental impact assessment procedure for Eskom