Occupational Health and Safety Project Baseline Risk Assessment

Project/Job:	Assel Management Project Execution (Apollo Grid) Site - Apollo Substation	Scope of Risk Assessment:	Replacement HV Indoor primary switchgear	Next Review Date:	Unique Identifier: 240-70034502
Date: 19-Sep-16	Prepared by: David Pelesane Designation: Safety Advisor	Authorised by: Sesha Mahoney Signed: Date: 19/09/2016			Revision: 0 Revision date: Apr-19

National Health and Safety Risk Assessment Procedure 32-103

1: List activity	2: Hazard Identification				3: Risk Identification						4: Assess & Analyse Risks					4: Evaluate Risks						5: Reduce & Eliminate Risks							
List activity	Hazard nr	Hazard Identification	Risk Nr	Exposed group/employees	Risk Owner	Exposure patterns	Associated risk	Risk type	Conditions/Risk at a glance	Causes of the risk	What are the Consequences?	Existing Controls	Consequence	Likelihood	Risk Priority Rating	RCE Risk Control Effectiveness	Additional Controls to Take Across or Improving Existing Controls	Consequence	Likelihood	Risk Priority Rating	Monitoring Mechanisms	Control Owner	Legal and Other Requirements	Initial Target Date	Revised Target Date	Current Status	Independent Verification (i.e. Check notice that the objectives have been met)		Comments
List specific activities to be performed taking into consideration the equipment to be used, the personnel involved in the task.	n	A hazard is anything that is likely to lead to an event that may an adverse impact on achieving an objective. A hazard can pose more than one risk.	n	Who is exposed to the hazard e.g. Employees, visitors, members of the public etc	Who is accountable for making sure the controls and monitors are - in place - implemented. - regularly reviewed for effectiveness.	The frequency and duration the person/group is exposed to the hazard e.g. Daily for 2 hrs.	A physical event occurs in relation to the hazard	Safety or health	Indicate Yes or No. These Keywords changes to conditions that could notice immediately an occurrence e.g. Gas/pipe/Gas	What causes the risk to come into effect?	What is the expected adverse impact on the objective?	Include - Preventative Controls (controls implemented to eliminate hazards or reduce the likelihood of the risk occurring) and - Reactive Controls (controls implemented to reduce the immediate impact of the risk occurring)	Consequence	Likelihood	Risk Priority Rating		Include - Preventative Controls (controls implemented to eliminate hazards or reduce the likelihood of the risk occurring) and - Reactive Controls (controls implemented to reduce the immediate impact of the risk occurring)	Consequence	Likelihood	Risk Priority Rating	How we know if we are succeeding (include comments on effectiveness). This may include i.e. measurements, inspections, supervision where necessary	Person allocated the responsibility for implementing the agreed controls	Where relevant, list the relevant legislation and or Eskom requirements that prescribe the control	Once a date has been agreed to this can not be changed	Used if, for any reason, a Target Date is revised. Use the Comments field to explain.	Pending, In Progress, Complete	Date Done:	By whom:	
Driving on Public Roads	1	Driving	1	Employees	Principal Contractor	Daily	Vehicle incidents, High Jacking of vehicles	Safety	Normal	Not paying attention, risk assessment not done, not furnish with live road,making use of cellphone, distractions, exposed to unsafe behaviour, congested roads, Pedestrians and live stock, Taxi and Truck on the road, Civil unrest	Injuries, Property damage	Staff driving vehicles to have national driver's licence , vehicles in roadworthy condition, required POP permits transporting employees, only transport authorised staff in vehicle, pre-trip check,and obeying of all traffic laws, Adherance to life saving rules .	3	3	II	P	To adhere to the existing controls	3	2		Incident records		National Road Safety Act, ESKOM Procedure 32-83 (Vehicle and driver safety management) , ESKOM Procedure 36-564 (Vehicle safety and transportation management) , Life saving rules							
Long distance driving	2	Driving	2	Employees	Principal Contractor	Daily	Vehicle incidents	Safety	Normal	Not paying attention, risk assement not done, not furnish with the road,making use of cellphone, distractions, exposed to unsafe behaviour, Lose rest periods, Taxi and Truck, Pedestrians and live stock	Fatigue, Injuries, Property damage	Staff driving vehicles to have national driver's licence , vehicles in roadworthy condition, only transport authorised staff in vehicle, pre-trip check,and obeying of all traffic laws, adherance to life saving rules.	3	3	II	P	To adhere to the existing controls	3	2		Incident records		National Road Safety Act, ESKOM Procedure 32-83 (Vehicle and driver safety management) , ESKOM Procedure 36-564 (Vehicle safety and transportation management) , Life saving rules							
Foundations, Earthworks, Restricted Excavation, Erection of fixed lights poles, SANS 1200 GA Concrete (small works), Erection of Fences concrete, Building of Guardhouse, Tilling old fences down, Erecting sliding gates	3	Equipment and material handling	3	Employees, Visitors and contractors	Principal Contractor Construction Manager, Site Supervisor	Daily	Hand and body injuries	Safety	Normal	Not focused, Wearing loose clothing, Holding loose equipment	First aid injuries or possible fractures	Be alert when entering a HV yard,Control rooms and comply with instructions as per the sign posting. Always pay attention. Method Statement for safe execution as per HIRA, Building method statement, electrical connection method statement, elevated work method statement	2	2		P	Adhere to the existing controls	1	2		Incident records		LPI, escalator and passenger conveyor regulations, accordance with the SANS 1545-10 or SANS 1545.							
Walking on substation grounds (uneven surfaces)	4	Not paying attention, Use of cellphones while walking, Inappropriate footwear,Not holding onto handrails, Distractions	4	Employees, Visitors and contractors	Site Supervisor	Daily	Slip,Trip and Fall	Safety	Normal	Ascending and descending stairs,making use escalators	First aid injuries or possible fractures	OPERATIONAL CONTROL: All staff to obey barricading and sign posting, use of handrails when ascending and descending stairs and escalators, take note of possible tripping, slipping and falling hazards. PROGRAMME: wear correct footwear, SHE talks, and apply situational awareness.	2	2		P	To adhere to the existing controls	1	2		Incident records							
Walking in and between substation buildings or facilities	5	Uneven surface, Slippery surfaces, Not paying attention, Use of cellphone while walking, Use of inappropriate foot wear, not holding onto handrails, Distractions.	5	Employees	Site Supervisor	Daily	Slip,Trips and fall	Safety	Normal	Wet or slippery floors, loose cables, ascending and descending stairs,making use escalators, poor housekeeping	First aid injuries or possible fractures	OPERATIONAL CONTROL: All staff to obey barricading and sign posting, use of handrails when ascending and descending stairs and escalators, take note of possible tripping, slipping and falling hazards. PROGRAMME: wear correct footwear, SHE talks, and apply situational awareness.	4	2		P	To adhere to the existing controls	1	2		Incident records		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) section 8 (1): Employer shall provide and maintain as far as is reasonably practicable a working environment that is safe and without risk to the health of his employees.							
Daily site activities and ergonomics at workstations	6	Poor ergonomics at workstations	6	Employees	Principal Contractor Construction Manager, Site Supervisor	Daily - Office people - 8hrs	Work related upper limb disorders, repetitive strain syndrome, carpal tunnel syndrome	Safety	Normal	Not sitting regular breaks, not sitting properly,not using mouse wrist pad .	Injuries and back problems	Use of footrest for identified employees, correct workstation layout, ergonomically designed chair, avoid long working sessions (allowing muscles to relax).	2	2		P	To adhere to the existing controls	1	1		Reports and supervision		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8 of the Facilities Regulation (Seats).							
Needs plant, equipment and tools	7	Inadequate/Excessive lighting levels	7	Employees	Principal Contractor Construction Manager, Site Supervisor	Daily - Construction site 8hrs.	Exposure to glare and sunlight	Safety	Normal	Mobile plant, tools and equipment situated close in the work site, excessive lighting	Damage to eyes, impaired vision, headache	Ensure sufficient illumination levels are provided and maintained under all operating circumstances, position workstation so to minimize glare, illumination surveys of workstations	2	2		P	To adhere to the existing controls	1	1		Reports, Inspection and Supervision		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 3 of the Environmental Regulations for Workplaces (Lighting).							
Working within the substation environment - work will be taking place in-between the security fence/fire chamber	8	Electrocution	8	Employees, Visitors	Construction Manager Principal Contractor	Daily	Burns, injury, fatality	Safety	Normal	Poor housekeeping, Exposed electrical cords, Overloading of sockets,	Injury, illness, fatality and property damage	OPERATIONAL CONTROL: OHVS Authorisation Contractor Site Supervisor (Responsible Person), mobile fire alarms, earth leakage on electrical boards, no smoking in buildings. MONITORING AND MEASUREMENT: Regular inspections of electrical equipment (PEE checks), SHE rep monthly inspections. PROGRAMME: SHE induction, fire extinguisher training, fire marshal exercise by Fire Marshal or, observations, situational awareness.	4	2		P	To adhere to the existing controls	2	1		Inspections		SANS 10400 and Environmental Regulation for workplaces 9: (Fire precautions and means of egress) and EP Procedure							
Using appropriate PPE as per Hazard identification Risk Assessment	9	Improper PPE usage	9	Employees	Principal Contractor Construction Manager, Site Supervisor	Daily	Hazardous substances (Transformer Oil), snakes, spiders, scorpions, bees, etc.	Safety	Normal	Improper usage, handling and not focusing on the job at hand	Injury, burns	SHE talks, safety induction, Risk Assessments (Ra's), Supervision, SMAT Behavioural Safety Observations, Job or Task Observations, etc.	4	2		P	Warning signs in all buildings, safety toolbox talks (awareness)	2	1		Incident records, BO's							
Using of hot water and/or hazardous chemical substances (cement, paint, etc.)	10	Hot water and/or hazardous substances	10	Employees, Visitors	Principal Contractor Construction Manager, Site Supervisor	Daily	Injuries	Safety	Normal	reckless or negligent handling and application of hot water and hazardous substances causing the substance to splash on person	Injury, burns	SHE talks,	4	2		P	Sign conspicuously displayed to warn staff, alertness and consciousness of surroundings	2	1		Incident records		OHSAct section 8 (1): Employer shall provide and maintain as far as is reasonably practicable a working environment that is safe and without risk to the health of his employees.							
Exposure to sun, wind, cold and uneven ground surfaces on site	11	Exposure	11	employees	Principal Contractor Construction Manager, Site Supervisor	Daily	Dehydration, heat strokes, sunburn, hypothermia (winter)	Safety	Normal	Insufficient safe water supplies, no sanitary, no sunscreen or sunblock lotion, insect repellent, no fully equipped first aid kit	Injury, burns	sufficient safe water supplies, sanitary, sunscreen or sunblock lotion, insect repellent, fully equipped first aid kit, Site specific Emergency Prepared Plan to attend to a medical emergency on site, SHE toolbox talks, safety induction	2	2		P	Induction Awareness & Safety Toolbox Talks	2	1		No incidents recorded		OHSAct section 8 (1): Employer shall provide and maintain as far as is reasonably practicable a working environment that is safe and without risk to the health of his employees.							
General ventilation and extraction (only applicable if working inside building and/or confined space	12	Poor Ventilation	12	Employees, Visitors		When its not serviceable	Discomfort and increased stress upon staff due to elevated temperature, CO2 level etc.	Health	Normal	not serviced extractor fans	Illness & discomfort	Notify Maintance if ventilation system is not working so that it can be repaired as soon as possible. Maintenance conduct regular checks on the ventilation site .	4	2		P	To adhere to the existing controls	2	1		Inspections		Environmental Regulation for Workplaces 5: (Ventilation), Facilities Regulation 9: (Condition of rooms and facilities).							

Yes	Safety	1	1	1		
No	Health	2	2	2		
		3	3	3		

General lifting and physical Manhandling of components	13	Improper lifting techniques	13	Employees, Visitors	Principal Contractor Construction Manager, Site Supervisor	Daily	Sprains and sprains, Fractures, dislocations,	Safety	Normal	Improper lifting technique	Injuries	Use additional LABOUR to reduce chance of back injury, use of correct lifting techniques, make use of trolleys to transfer equipment, make use of biokinetics for back safe program, treatment of minor back complaints, use of correct PPE (Safety shoes, gloves etc.), observations, SHE talks, STAR, Reporting of minor lifting related injuries immediately	4	2		P	Discussion of Tank Manual or Safe Work Method Statements for Physical material handling, Continual awareness sessions through health and wellness	2	1		No incidents recorded		OHSA Section 14 - Duties of employees OHSA GSR 2(2)(c) - Personal safety equipment and facilities & 34-108						
Stacking and storage	14	Improper stacking and storage	14	Employees	Principal Contractor Construction Manager, Site Supervisor	Daily	Falling objects	Safety	Normal	Improper stacking and storage	Injuries	Good standard of housekeeping, Neat, stable and controlled stacking Handling methods	4	2		P	Good labelling of material storage	2	1		No incidents recorded		34-108						
Responding to a fire (still unannounced) Emergency evacuation drills	15	Fire / Inappropriate response to immediate danger	15	Employees	Principal Contractor Construction Manager, Site Supervisor	Once a year	Trapped in fire and or letting it get out of control, stampeding	Safety	Normal	Poor planning, Poor communication of EP plan to employees, Not having trained statutory appointments in place namely :Evacuation Officials etc. Poor housekeeping	INJURY: Fire burns, suffocation DAMAGE : assets	Training, escape route demarcated and uncluttered, correct emergency number posted, fire drills and fire fighting equipment available, HazOb and safety inspections, EP procedure is discussed in each meeting.	4	2		P	To adhere to EP plan for the buildings or site	2	1		Fire excersice		EP procedure						
Using of sanitation station and toilet facilities, Biochemical Facilities	18	Poor hygiene	18	Employees and visitors	Principal Contractor Construction Manager, Site Supervisor	Daily	Diseases		Normal	Unhygienic environment	Illness	Housekeeping, Hygiene	2	2		P	Awareness	2	1		No incidents recorded		Facilities Regulation 2: (Sanitation), Facilities Regulation 6: (Dining Rooms).						
Working on site (Contractor employees)	17	Insects	17	Employees and contractors		Weekly	Insects bites	Health	Normal	Insects disturbance, Weather conditions	Experience burning, pain, itching, redness, headache, rash, nausea, vomiting	OPERATIONAL CONTROL: Individuals to be aware of their status regarding allergies. Seek immediate emergency care for treatment. Treatment may include: Wash the area well with soap and water. Apply a cold or ice pack wrapped in a cloth, or a cold, wet washcloth to the site. Protect against infection. Elevate	3	2		P	Employees to be tested for allergies (medical surveillance)	2	3		No incidents recorded		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) 85 of 1993 Section: 14 GENERAL DUTIES of EMPLOYER Subsection: (a) - (h) read with Section: 21 GENERAL PROHIBITIONS Subsection: (c)						
	18	Bees	18	Employees and contractors		Weekly	Bee stings	Health	Normal		Allergic reaction i.e., pain, redness, swelling, itching, sweating, anxiety, dizziness or fainting. Possible fatality.	Individuals to be aware of their status regarding allergies and inform rest of group. In the case of a bee sting, make use of a first aider.	3	2		P	Employees to be tested for allergies	2	3		No incidents recorded		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) 85 of 1993 Section: 14 GENERAL DUTIES of EMPLOYER Subsection: (a) - (h) read with Section: 21 GENERAL PROHIBITIONS Subsection: (c)						
	19	Snakes	19	Employees and contractors	Principal Contractors employees	Weekly	Snake bites	Health	Normal	Working in the field, vegetation & weather condition	Shock, fever, fainting, rapid pulse and breathing difficulties and worse case fatality.	Leave snakes alone. Always be aware of your surroundings. Stay out of tall grass unless you wear thick leather boots. Keep hands and feet out of areas you cannot see. It is very important to try and note what the snake looked like (colour, size etc.)... to assist Medical Services or treating physician to establish what anti-venom to administer	3	2		P	Employees to be tested for allergies	2	4		No incidents recorded		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) 85 of 1993 Section: 14 GENERAL DUTIES of EMPLOYER Subsection: (a) - (h) read with Section: 21 GENERAL PROHIBITIONS Subsection: (c)						
	20	Wet or slippery or uneven surfaces	20	Employees and contractors		Weekly	Slip, Trip & Fall on wet floors or uneven surfaces	Safety	Normal	Weather conditions, not paying attention & uneven surface	Injury	Obey barricades & sign posting. PPE to be worn, be aware of where you are stepping, clean up spills immediately, Safety talks & Risk Assessment	4	3		P	Awareness	2	2		Records		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Section 8 (1) Employer shall provide and maintain as far as is reasonably practicable a working environment that is safe and without risk to the health of his employees.						
Scaffolding (Working in elevated positions) and entry into work areas (overhead / elevated activities only)	21	Performing inspections, working at heights and monitoring activities in the area.	21	employees	Principal Contractor Construction Manager, Site Supervisor	Daily	Hazards pertaining to that particular job such as falls, bumping into equipment etc.	Safety	Normal		Injury, fractures, fatalities	Risk Assessment charts, as part of any person may pass below a lifted load, barricading of area. Scope of Work Specific FALL PROTECTION PLAN and Fall Protection Risk Assessment, Tank Observations	3	2		P	Awareness	2	2		Inspection.		Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulations 14 of the Construction Regulations (Scaffolding), General Safety Regulation 9: Work in sky crane pendens), SANS 10085 (The Design, Erection, Use and Inspection of Access Scaffolding, Working at Height Procedure 32-416.						
During tea breaks and lunch breaks on site	22	Outdoor Activities	22	Employees	Principal Contractor Construction Manager, Site Supervisor	Twice a year	Falling, Sprain ligaments, Body Injuries, Exhaustion, vehicle incidents	Safety	Normal	not paying attention, risk assessment not done, not familiar with the place	Medicals, Lost time injuries	Safety talks, Warning notice, Risk assessment and Situational awareness.	4	2		P	Proper planning	2	1		Incident records								