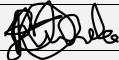


Occupational Health and Safety Baseline risk assessment template																															
Project/Dept: Auxiliary Engineering		Fire Protection Upgrade to Address Worst Case Fire Scenario													Next Review Date: N/A				Unique identifier	240-70044602											
Date: 2021/07/23									Prepared by: Fanyane Kubeka												Revision: 0										
																			Revision date: Aug-23												
Refer to Occupational Health and Safety Risk assessment procedure 32-520																															
1: List activity	2: Hazard identification		3: Risk Identification								4: Assess & Analyse Risks							5: Evaluate Risk								6: Reduce & Eliminate Risk					
List activity	Hazard nr	Hazard Identification	Risk Nr	Associated risk (Risk Identification)	Risk type	Exposed group/employees	Exposure patterns	Cause(s) of the risk	Risk Owner	Conditions(Normal/Ab normal)	What are the Consequences?	Existing Controls	First determine Consequence and then the Likelihood of that Consequence.					Additional Controls or Tasks Aimed at improving Existing Controls	First determine Consequence and then the Likelihood of that Consequence.		Monitoring Mechanisms	Control Owner	Legal and Other Requirements	Initial Target Date	Revised Target Date	Current Status	Independent Verification (i.e. Confirmation 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.	#	A hazard is anything that is likely to lead to an event that will have an adverse impact on achieving an objective. A hazard can pose more than one risk.	#	A physical event occurs or could occur in relation to the hazard	Safety or health	Who is exposed to the hazard i.e. Employees, visitors, members of the public, etc.	The frequency and duration the person/group is exposed to the hazard e.g. Daily for 3 hrs.	What causes the risk to come into effect?	Who is accountable for making sure the controls and monitors are: - in place, - implemented, - regularly reviewed for effectiveness.	Indicate Yes or No. These short-term changes to conditions that could not be reasonably anticipated e.g. Emergencies	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	RCE Risk Control Effectiveness	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 legislative and or Eskom requirements that prescribe the control.		Used if, for any reason, a Target Date is revised. Use the Comments field to explain.	Pending. In Progress, Complete	Date Done:	By whom:			
Installation of Pumps, drivers such as motors and diesel engines, piping, valves replacement, Alignment of drivers	1	Noise	1.1	Noise induced hearing loss	Health	Employees and contractor employees.	Hours/Daily	Running machines in the plant	Line Manager/Site Supervisor	Yes	Induced hearing loss	Enforce wearing of PPE(ear plugs, variphones, ear muphs)	3	3	II	P	Inspection, pre job brief, continuous monitoring and enforcing use of PPE (ear plugs,variphones,ear muphs)	2	3	III	Periodical health screening, Continuous supervision of work, Investigation of hearing loss, trending of incidents	Contract Manager/Suervisor	OSHact 85 of 1993 - Noise induced hearing loss regulations								
	1	Noise	1.2	NIHL nonreversible occupational disease	Health	Employees and contractor employees.	Daily	Not wearing proper PPE for protection against noise	Line Manager/Site Supervisor	Yes	Induced hearing loss	Ensure use of hearing protection in all noise areas of 85DB and above.Protection to have adequate attention	4	4	I	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant	3	2	III	health screening, Incidents investigation and trending of them	Contract Manager/Suervisor	Oshact 85 of 1993, PSR, Noise Induced Hearing Loss Regulations								
	2	Lighting	2.1	Insufficient lighting	Safety	Employees and contractor employees.	Hours/Daily	Poor Maintenance of lights	Line Manager/Site Supervisor	Yes	Injuries	Lighting inspection before work commence, ensure sufficient lighting	3	3	II	P	Inspections, Establish light inspection PM and implement, take corrective measures.	2	2	IV	Lighting survey and implement recommendations from the findings	Contract Manager/Suervisor	Oshact 85 of 1993 - Environmental regulations for work places								
	3	Pinch points	3.1	Injuries	Safety	Employees and contractor employees.	Hours/Daily	Working with hand tools	Line Manager/Site Supervisor	Yes	Body injuries	Pre job brief, wearing of leather gloves,safety awareness	3	4	II	P	Discuss the risk assesment before resuming with works, Inspect hand tools if in good condition before use	2	2	IV	Continuous buddy check and ensure there's no horse playing taking place. Continuous inspection	Contract Manager/Suervisor	Oshact 85 of 1993, Statutory PM for hand tools								
	4	Use of lifting equipment	4.1	Falling of suspended load	Safety	Employees and contractor employees.	Daily	Lifting equipment with suspended load over working area	Line Manager/Site Supervisor	Yes	Injuries/Death	Safety awareness, pre job brief, supervision, tool box talk, Warning/Evacuate (change position of) people when overhead crane is used over the sump.	4	4	I	P	Enforcement use of PPE(hard hat) pre job briefs.Supervision, Job observation, Peer checking	2	2	IV	Continuous supervision and continuous wearing of PPE, PSR	Contract Manager/Suervisor	Oshact 85 of 1993 , PSR, IBI Tools								
	4	Use of lifting equipment	4.2	Crushing of employees (fatal)	Safety	Employees and contractor employees.	Daily	Not observing while working, Failure of lifting equipment, lack of training on lifting equipment, using defective lifting equipment, work not supervised.	Line Manager/Site Supervisor	Yes	Injuries/Death	Only compent persons to carry out lifting operations. Proof to be available and ongoing statutory inspection by competent persons of lifting tackle and machines.Working under suspended loads prohibited.Safety boots and shoes with steel toe caps to be worn by all employees in plant.	4	4	I	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Job observation, SMAT observation, trending of incidents, Safety statistics management, Occurance management.	Contract Manager/Suervisor	OSHact 85 of 1993, PSR, Statutory PM or lifting equipment,HSPPI N029 The Training, Awareness & Competence Procedure								
	5	Cat ladders	5.1	Trip and fall	Safety	Employees and contractor employees.	Daily	Use of cat ladder when accesssing water storage tank, valves	Line Manager/Site Supervisor	Yes	Injuries	Use of three point contact, Safety awareness, pre job brief	4	4	I	P	Safety awareness, Enforce use of three point contact, SMAT Observations	2	3	IV	SMAT Observations, Sharing of OE with employees	Contract Manager/Suervisor	Oshact 85 of 1993, Statutory PM for inspection of civil structure								
	6	Pipe lines under pressure	6.1	Unexpected leaks of piping	Safety	Employees and contractor employees.	Daily	Corroded piping	Line Manager/Site Supervisor	Yes	Injuries	Repair / replaced damaged piping	3	3	II	P	Safety awareness, Continuous monitoring of preventive measures as per the PM frequency and implementation thereof.	2	3	IV	Review maintenance strategy for continuous improvement, implement and monitor	Contract Manager/Suervisor	Maintenance strategy and the usage of PMs								
General maintenance of plant	7	Employees not aware of hazards	7.1	Injuries and multiple fatalities as well as occupational disease resulting from failure to inform.	Safety	Employees and contractor employees.	Daily	Failure to inform employees ref. OSHact of 1993 duties of employer	Line Manager/Site Supervisor	Yes	Injuries and multiple fatalities as well as occupational diseases.	Ensure that employees are inducted annually. Sharing of OE. Tool box talk	4	4	I	P	Sharing of OE, Job observations, SMAT Observations	2	2	IV	SMAT Observations, All OHsact requirements (duties of employer)	Contract Manager/Suervisor	Oshact of 1993, Induction								
Structure painting	8	Paint	8.1	Occupational deseases	Health	Employees and contractor employees.	Daily	Painting without adhering to health requirements - inhalation (use of PPE)	Line Manager/Site Supervisor	Yes	Occupational deseases	pre job brief, Supervision, job observation, risk assessment,periodical health screening, enforce use of PPEHSPPIN029 The Training, Awareness & Competence Procedure HSPPIN003 The Waste Management Procedure HSPPIN003	4	4	I	P	Job observations, SMAT Observations, enforce use of breathing apparatus	2	2	IV	Continuous supervision, sharing of OE, Incident investigations, SMAT Observation and use of PPE	Contract Manager/Suervisor	Risk assessment, periodical health screening, enforce use of PPEHSPPIN029 The Training, Awareness & Competence Procedure HSPPIN003 The Waste Management Procedure HSPPIN003								
Contruction of new structure	9	Unstable and uneven flooring	9.1	Slips , trips and falls	Safety	Employees and contractor employees.	Daily	Construction work	Line Manager/Site Supervisor	Yes	Injuries	Ensure all employees are aware of hazard,(also see lighting) Ensure wearing of suitable footwear safety boots or shoes, wear live jacket, HSPPMS002: maintenance emergency response	3	3	II	P	IBI Tools, risk assessment, Enforce use of PPE (Live jackets) Continuous supervision of works	2	2	IV	Supervision, Tool box talk.	Contract Manager/Suervisor	Oshact 85 of 1993, PSR,								

Maintenance of fire protection System (replacement of components, inspection, testing functionality)	10	Portable hand tools electric tools i.e electric drill machines, grinders, jack hammers, lighting etc	10.1	Trip and fall caused by electric cables lying on the ground.	Safety	Employees, contractor employees	Hours/daily	Poor housekeeping	Contract Manager/Site Supervisor	Yes	Injuries	Bind the electric wires, and enforce and maintain good housekeeping.	3	4	II	P	Ensure continuous housekeeping, the RP must make sure that before the permit is cleared all tools and debris are removed from the working area and project supervisor must verify.	2	2	IV	Project supervisor regularly checks the portable tools if are in good condition and make sure that the safety operating procedure is followed. Pre job brief.	Contract Manager/Su pervisor	Plant safety regulations, OSHact 85 of 1993							
	10	Portable hand tools electric tools i.e electric drill machines, grinders, jack hammers, lighting etc	10.2	Exposed wires /faulty electric cables electrocution if not attended.	Safety	Employees and contractor employees.	Hours/Daily	Exposed electric wires	Contract Manager/Site Supervisor	Yes	Severe injuries/Burns (electrocution)	Use inspected electrical cables, All defects must be fixed and the plugs must be switched off when hand tools are not in use. Conduct regular inspection on all the hand tools.	3	4	II	P	Ensure continous inspection of the hand tools, the supervisor must inspect the handtools before employees start working, the employees also have the responsibility to check tools before they use them.	2	2	IV	Statutory PM for checking condition of tools. Ensure continous inspection of the hand tools, the supervisor must inspect the handtools before employees start working, the employees to check tools before they use them.	Contract Manager/Su pervisor	Statutory PM for tool inspection, Plant safety regulations, OSHact.85 of 1993.							
	11	Height	11.1	Fall from heights (death / permanent disability	Safety	Employees and contractor employees.	Hours/Daily	Not adhering to working at heights rules (safety harness)	Contract Manager/Site Supervisor	Yes	Multiple injuries /death	Ensure wearing of safety harness and only use approved and inspected platforms.	4	2	III	P	Project Supervisor must check the platforms if are inspected, green tag is affixed and enforce wearing of PPE(safety harness)	2	2	IV	Fall protection plan. Continuous monitoring of work.(supervision,PSR), apply life saving rules	Contract Manager/Su pervisor	OSHact of 1993 - Construction regulations							
	12	Stairs	12.1	Trip and fall	Safety	Employees and contractor employees.	Daily	Use of staircase when passenger lift is OC	Contract Manager/Site Supervisor	Yes	Injuries	Use of three point contact, Safety awareness, pre job brief	4	4	I	P	Safety awareness, Enforce use of three point contact, SMAT Observations	2	3	IV	SMAT Observations, Sharing of OE with employees	Contract Manager/Su pervisor	Oshact 85 of 1993, Statutory PM for inspection of civil structures							
	13	Passenger/ Goods lift	13.1	Stuck in a lift due to lift being defective	Safety	Employees and contractor employees.	Daily	Use of lift		Yes		Use of emergency contact numbers displayed in the lift, be calm, do not panic, peer checking and encouragement	3	4	II	P	Safety awareness, Tool box talk on use of lifts	2	3	IV	Sharing of OE of previous lift incidents	Contract Manager/Su pervisor	Oshact 85 of 1993, Statutory PM for Lifts inspection,							
Replacement of piping, valves	14	Working at height	14.1	Falling from Heights	Safety	Employees and contractor employees.	Daily	Not adhering to working at heights rules (safety harness), Lack of training,	Line Manager/Site Supervisor	Yes	Injuries/Death	An approved fall protection plan(approved by Eskorn manager) to be in place prior to commencement of work.Supervisors top ensure compliance by daily formal documented job observation.	4	4	I	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Job observations,Supervision . Smat.	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR,							
	15	Staircases	15.1	Slips trips and falls	Safety	Employees and contractor employees.	Daily	Not adhering to working at heights rules (safety harness), Lack of training,	Line Manager/Site Supervisor	Yes	Injuries/Death	Ensure all employees are aware of hazard.(also see lighting) Ensure wearing of suitable footwear safety boots or shoes, wear live jacket, HSPPPMS002: maintenance emergency response	3	4	ii	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Smat observation	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR,							
	16	Nipping points	16.1	Amputation - servere injury	Safety	Employees and contractor employees.	Daily	Not observing while working,	Line Manager/Site Supervisor	Yes	Injuries/Death	Identify all nipping points and do awareness with a all employees.	3	4	II	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Smat observation	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR,							
	17	Heat exhaustion	17.1	Collapse, loss of consciousness - Death.	Safety	Employees and contractor employees.	Daily	Working in hot area, not wearing proper PPE(hat for sun), Not following good work practices (changing of employees on suitable rest period in a cool place). Not drinking enough water while working under hot conditions.	Line Manager/Site Supervisor	Yes	Death	Temperature monitoring to be carried out and suitable rest periods and hydration to be provided.	4	4	I	P	Safety awareness, Continuous supervision of work. All OHSact requirements to be met. Job observation	3	2	III	Job observation, SMAT observation, trending of incidents, Safety statistics management, Occurance management.	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR, HSPPIN029 The Training, Awareness & Competence Procedure							
	18	Sharp points and edges	18.1	Amputation/piercing, contusion - servere injury	Safety	Employees and contractor employees.	Daily	Not observing while working, unsafe acts (horse play)	Line Manager/Site Supervisor	Yes	Injuries/Death	All such points to be identified and employees to be warned to avoid. Pre job brief, safety awareness	3	4	II	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met.	3	2	III		Contract Manager/Su pervisor	OSHact 85 of 1993, PSR,							
	19	Scaffolding	19.1	Failure of scaffolding	Safety	Employees and contractor employees.	Daily	Not properly constructed/inspected/appr oved for use	Line Manager/Site Supervisor	Yes	Injuries/death	Ensure trained/approved contractor construct the scaffold/Check for approval before use(greem tag), inspection before use, only trained personnel to build scaffold	2	4	II	P	Permit to work, Inspections after construction, trained personnel, Safety awareness, Continuous supervision of work. All OHSact requirements to be met.	3	2	III	frequent inspection after construction, Compliance checking & monitoring, Sharing of OE of previous incidents	Contract Manager/Su pervisor	Plant safety regulations, OSHact 85 of 1993,							
	20	Working in dark area	20.1	Poor visibility	Safety	Employees and contractor employees.	Daily	Inadequate illumination	Line Manager/Site Supervisor	Yes	Injuries	Ensure adequate lighting before work starts	3	4	II	P	Safety awareness, Install adequate lighting.	3	2	III	Sharing of OE of previous incidents	Contract Manager/Su pervisor	OSHact 85 of 1993,							
	21	Open flames and sparks	21.1	Fire , Burn wounds,installation damage.	Safety	Employees and contractor employees.	Daily	Not following hot work procedure, not being observant., lack of training	Line Manager/Site Supervisor	Yes	Injuries	Supervision, Job observation, Permit to work, Hot work Permits	3	4	II	P	Safety awareness, Training, continuous supervision, job observation	3	2	III	Smat observation, Job observation, Continuous supervision	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR, hot work procedure.							
	22	Hand tools	22.1	Severe injuries - amputation/piercing etc.	Safety	Employees and contractor employees.	Daily	Not observing while working, lack of training, unsafe acts (horse play), incorrect application of tools, use of uninspected tools	Line Manager/Site Supervisor	Yes	Injuries/Death	Only competent persons to use tools and understand associated hazards.Tools to be inspected regularly.No makeshift tools are allowed.Suitable gloves to be worn for relevant tasks.	3	4	II	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Job observation, SMAT observation, trending of incidents, Safety statistics management, Occurance management.	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR,							
	23	Earthmoving equipment .Collision with other vehicle , structures or pedestrian	23.1	Fatal	Safety	Employees and contractor employees.	Daily	Not observing while working, unclear visibility due to dust	Line Manager/Site Supervisor	Yes	Injuries/Death	Enforce use of reflective bibs in relevant area and do awareness via prejob brief, supervision, HSPPPMS002: maintenance emergency response	4	4	I	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Job observation, SMAT observation, trending of incidents, Safety statistics management, Occurance management.	Contract Manager/Su pervisor	OSHact 85 of 1993							
Mixing of paint with paint thinners	24	Spillage of flammable substances	24.1	Damage to environment	Safety	Employees and contractor employees.	Daily	Use of defective containers, Lack of supervision, Not being observant during the mixing process	Line Manager/Site Supervisor	Yes	Injuries/Environ mental event	Pre job brief, Supervision, job observation, risk assessment,	3	4	II	P	Safety awareness, SMAT Observations, Continuous supervision of work. All OHSact requirements to be met. Plant safety regulations,	3	2	III	Reviewing of departmental environmental aspects, Environmental awareness management	Contract Manager/Su pervisor	OSHact 85 of 1993, SHEQ Policy							
	25	Spillage of coating material	25.1	Slipping	Safety	Employees and contractor employees.	Daily	Improper handling, poor housekeepin	Line Manager/Site Supervisor	Yes	Injuries	Maintain good housekeeping, supervision, inspections.	3	4	II	P	Safety awareness, Continuous supervision of work. All OHSact requirements to be met. Good housekeeping at all times	3	2	III	Sharing of OE of previous incidents	Contract Manager/Su pervisor	OSHact 85 of 1993,							
Use of overhead crane	26	Suspended load	26.1	Falling	Safety	Employees and contractor employees.	Daily	Not properly secured	Line Manager/Site Supervisor	Yes	Injuries/death	Only trained personnel and declared competent personnel to operate crane, Wear correct PPE (hard hat, safety shoes), Pre-job brief	3	4	II	P	Safety awareness, Prejob brief, training & Refresher training of personnel.	3	2	III	Training of personnel, Sharing of OE of previous incidents	Contract Manager/Su pervisor	LMO Procedure, Training procedure, OSHact 85 of 1993,							
	27	Unauthorised use of overhead	27.1	Incorrect operation	Safety	Employees and contractor employees.	Daily	Crane not locked	Line Manager/Site Supervisor	Yes	Injuries/Death	Ensure cranes are locked at all times and keys kept at a dedicated office and use of crane records kept current(record,sign for use-log book)	4	4	II	P	Safety awareness, Safety internal audits, SMAT Observations, Training Matrix	3	2	III	Internal safety audits, Plant walk(inspections) SMAT Observation, Sharing of OE of previous incidents	Contract Manager/Su pervisor	LMO Procedure, Training procedure, OSHact 85 of 1993,							
	28	Hoisting	28.1	Failure of crane while hoisting	Safety	Employees and contractor employees.	Daily	Defective hoisting components(ropes,wheels,b olts.covers, etc)	Line Manager/Site Supervisor	Yes	Injuries/death	Statutory inspections, PM Compliance, Ensure necessary test are done as per the PM	3	4	II	P	Compliance to lifting equipment regulations, Safety awareness, Continuous supervision of work. All OHSact requirements to be met.	3	2	III	Trained personnel and declared competent, Compliance to statutory inspections, Sharing of OE of previous incidents	Contract Manager/Su pervisor	Maintenance strategy, OSHact 85 of 1993,							

Plant Inspections	29	Plant walk inspections	29.1	Trip & fall, caught by, strike by,	Safety	Employees and contractor employees.	Daily	Not observing while walking, material spillages, bad housekeeping, unguarded running machine, protruding plant componets	Line Manager/Site Supervisor	Yes	Injuries/Death	Pre job brief, safety awareness, sharing of OE, wear correct PPE (goggles, safety boots/shoes, overalls, hard hat,) no loose clothing.	4	4	I	P	Safety awareness, SMAT Observations, maintain good plant housekeeping, be observant when doing plant inspections, employees to be inducted before working in the plant	3	2	III	Job observation, Safety Induction, SMAT observation, trending of incidents, Safety statistics management, Occurance management.	Contract Manager/Su pervisor	OSHact 85 of 1993, PSR, Statutory PM or lifting equipment,HSPPI N029 The Training, Awareness & Competence Procedure						
Covid-19	30	Working	30.1	Spreading virus	Health	Employees and contractor employees.	Daily	Not observing social distancing, hand washing, sanitizing	Line Manager/Site Supervisor	Yes	Infection/Death	Pre job brief, safety awareness, sharing of OE, Wear correct mask	4	3	I	F	Safety awareness, SMAT, Observations, be observant, induction	3	3	III	Job observation, Safety Induction, SMAT observation, trending of incidents, Safety statistics management, Occurance managemen	Contract Manager/Su pervisor	Awareness, Government / Eskom requirements that prescribe the control						

	Name	Signature	Designation	Date
Compiled by	Fanyane Kubeka		Fire System Engineer	2021/07/23
Approved by	Ogorogile Ngwenya		Auxiliary & Civil Engineering Manager	2021/07/23
Authorised by				
Captured by				