

Occupational Health and Safety Baseline risk assessment template								
Business/Operating unit:	The Removal and Replacement of Superheater Front Pendant Finishing RUL Tubes at Kendal Power Station Unit 1 and 3 GO						Next Review Date (every 2 years):	Template identifier: 240- 70044602
Date:	13-Apr-22			Authorised by:		Name: Siboniso Mlyeza	Document identifier	
						Designation: Project manager	Revision number:	3
						Signed:	Revision date:	31-May-24
						Date:		
Refer to Occupational Health and Safety Risk assessment procedure 32-520								
List activity	Hazard Identification	Associated risk	Risk type	What are the possible consequences?	Existing Controls		Control Owner	Legal and Other Requirements
List specific activities to be performed taking into consideration the equipment to be used, the personnel involved in the task.	Anything with potential to cause of harm. Note: A hazard can pose more than one risk.	A chance that injury, ill health or damage could occur as a result of uncontrolled hazard.	Safety or health	Consider the worst case scenario without controls?	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) Elimination Substitution Engineering controls Administrative controls Personal protective equipment (PPE)	RCE Risk Control Effectiveness	Person allocated the responsibility for implementing the agreed controls	Where relevant, list the relevant legislative and/or Eskom requirements that prescribe the control.
Boiler super heater front pendant finishing replacement and dipper plate replacement	Falling objects	Struck by objects resulting in injuries and/or fatalities.	Safety	Struck by objects resulting in injuries and/or fatalities.	Communication on hazard awareness. Risk Assessment to address people work directly above each other. Personal protective equipment is provided and is mandatory. Installation of nets on the furnace and backpass.	Mostly effective	contractor	OHSAct
	Use of power tools	Cuts, pinch and injuries that could occur because of using tools.	Safety	Cuts, pinch and injuries that could occur because of using tools.	Inspection of tools quarterly, tool box talks. Awareness, Ensure good housekeeping. Induction is held to all employees.	Mostly effective	contractor	OHSAct, General Safety Regulation. Driven machinery Regulation. Electrical Machinery Regulation
	Noise	Loss of hearing	Health	Noise Induced Hearing loss	Plant maintenance programme is in place. Provision of PPE. Plant is demarcated as a noise zone. Awareness training	Mostly effective	contractor	OHSAct. NIHLR
	Working at heights	Falling from heights due to non-adherence to lifesaving rule 2: Hook up at heights	Safety	Injuries caused by Falling from heights, e bumping against structures, cut by, fractures and fatality	Communication - hazard awareness. Adherence to Live saving rules. Provide scaffold platforms. Ensure frequent scaffold inspections are done. Training: Working at heights is provided. Supervision and observations while working. Two way radio is provided while working in the area. PPE is provided. Provide life line in the absence of hook up points.	Mostly effective	contractor	OHSAct, Construction Regulations, Live Saving Rules
Repair of Fuel Oil Guns and 5 way valve refurbishment	Hot Fuel oil and Vapours	Contact with the hot fuel oil	Safety	Burns and acute dermatitis due to skin contact.	Provision of PPE, Awareness, Conduct risk assessment. MSDS for this chemical is available. Ensure PTW is in place	Mostly effective	contractor	OHSAct Regulations for HCS
		Inhalation of hot fuel oil	Health	Irritation of a respiratory system as well as lung problems.	Provision of PPE, Medical screening, Awareness, Conduct risk assessment. MSDS for this chemical is available.	Mostly effective	contractor	OHSAct Regulations for HCS
Repair of Sulphur Off loading pump and Transfer pumps	SO3 Chemical fluid	Contact with the chemical fluid	Safety	Burns and skin irritation.	Provision of PPE, Awareness, Conduct risk assessment. MSDS for this chemical is available. Chemical emergency shower.	Mostly effective	contractor	OHSAct Regulations for HCS
		Irritation of a respiratory system as well as lung problems. Dizziness	Health	Irritation of a respiratory system as well as lung problems. Dizziness	Provision of PPE, Medical screening, Awareness, Conduct risk assessment. MSDS for this chemical is available.	Mostly effective	contractor	OHSAct Regulations for HCS

	Heat and Aux steam	Contact with steam and hot surfaces	Safety	Burns and fatal injuries	PTW system. Proper and correct isolations are done. There is supervision while work is conducted. Two men rule applied. Life saving rules are adhered to. Job observations are carried out. Employees are provided with PPE.	Mostly effective	contractor	OHS Act
SO3 Catalyst Cleaning	Catalyst dust	Contact with Skin	Safety	Skin Irritation	Provision of PPE, Conduct risk assessment. MSDS for this chemical is available.	Mostly effective	contractor	OHSAct Regulations for HCS
		Inhalation of the catalyst dust	Health	Irritation of a respiratory system as well as lung problems. Dizziness	Provision of PPE, Medical screening, Awareness, Conduct risk assessment. MSDS for this chemical is available.	Mostly effective	contractor	OHSAct Regulations for HCS. HBA(Hazardous Biological Agent
Internal repairs of mills and PF Pipes	Coal dust	Contact with dust and inhalation of the dust	Health	Lung infection, eye infection, nasal infection, skin infection	Plant is washed with water to reduce the level of coal dust on the plant. The plant is on a regular planned maintenance. Employees are exposed for short periods. Access control (mandatory sign posted). FFP2 Dust masks are provided.	Mostly effective	contractor	OHSAct Regulations for HCS
	Falling objects	Struck by falling objects.	Safety	injuries and/or fatalities.	Communication on hazard awareness. Risk Assessment to address people work directly above each other. Personal protective equipment is provided and is mandatory.	Mostly effective	contractor	OHSAct, General Safety Regulation
	Power tools	Continuous use of power tools.	Safety	Cuts, pinch and injuries	Inspection of tools quarterly, tool box talks. Awareness, Ensure good housekeeping. Induction is held to all employees.	Mostly effective	contractor	OHSAct, General Safety Regulation
	Noise	Loss of hearing	Health	Noise Induced Hearing loss	Plant maintenance programme is in place. Provision of PPE. Plant is demarcated as a noise zone.	Mostly effective	contractor	OHSAct. NIHL Regulations
	Work at Heights	Falling from heights due to non-adherence to lifesaving rule 2: Hook up at heights	Safety	fractures, multi injuries and fatality	Communication - hazard awareness. Adherence to Live saving rules. Provide scaffold platforms. Ensure frequent scaffold inspections are done. Training: Working at heights is provided. Supervision and observations while working. Two way radio is provided while working in the area. PPE is provided. Provide life line in the absence of hook up points.	Mostly effective	contractor	OHSAct, General Safety Regulation, Construction Regulation
Flame cutting of metal on the plant and in the workshop	Ash and Coal dust	contact with and inhalation of the dust	Health	Chronic condition that could result in silicosis if exposed to coal dust, eye infection, nasal infection, skin infection	Planned plant maintenance programme to minimize excessive dust leaks; Provision of PPE, toolbox talk, Medical surveillance programme,	Mostly effective	contractor	PTW system OHSAct
	Noise	exposure to noise	Health	Noise induced hearing loss	Custom made as well as disposable hearing protections are provided.	Mostly effective	contractor	OHSAct
	Welding fumes	inhalation of and exposure to welding fumes	Health	Respiratory infections. Resulting with flue like conditions.	Provision of PPE, toolbox talk, Medical surveillance programme,	Mostly effective	contractor	PTW system OHSAct
	insufficient illumination	working in poorly lit areas	Health	Trips and falls that will result in serious injuries.	Planned plant maintenance programme is available.	Mostly effective	contractor	OHSAct
	Heat	Exposure to and working in hot environments	Health	Heat stress : dehydration, heat cramps, heat exhaustion and heat stroke.	Employees are provided with suitable personal protective equipment. Employees spend short periods on the plant	Mostly effective	contractor	OHSAct
Manual lifting of plates and equipment	falling of plates	incorrect method of lifting or moving of the plates is employed	Safety	Multiple injuries and/or fatalities	Provision of PPE (boots and gloves); Employees carry plates for very short distances. Risk assessment is carried out. SWP to be adhered to	Mostly effective	contractor	OHSAct
Mechanical lifting of plates and equipment using cranes	falling of plates	incorrect method of lifting or moving of the plates is employed	Safety	Multiple injuries and/or fatalities	Task risk assessment is carried out; crane is inspected using a checklist; The employee who operates a crane has a competence certificate; The lifting equipment is load tested.	Mostly effective	contractor	OHSAct, DM18
	Slipping and falling of the lifting tackle	incorrect method of using the lifting equipment, using incompetent employee to carry out the task, lifting equipment not inspected/defective	Safety	Injuries which are likely to be fatal.	correct selection of the equipment for the job, Inspection of lifting tackles, Awareness, Ensure good housekeeping,	Mostly effective	contractor	OHS Act, DMR 18
Fabrication and welding of metals	Sharp edges on metal plates/sheets.	poor handling of material, non-adherence to the PPE requirements	Safety	Serious injuries on fingers	Provision of gloves, toolbox talk is held, Risk assessment carried out for each job.	Mostly effective	contractor	OHSAct
	Sparks that can burn employees	control measures as instructed not implemented,	Safety	Serious bodily injuries	PPE provided include aprons, skullcaps, boots and fire resistant overalls amongst others. welding screens to be put up when hot work is performed	Mostly effective	contractor	OHSAct
	Welding fumes	Respiratory infection with flue like symptoms	Health	Respiratory infection with flue like symptoms	Welding is carried out in a well ventilated environment. Employees are provided with visors.	Mostly effective	contractor	OHSAct
	Ultraviolet rays	Eye infection that could result in arc eye then cataract.	Safety	Eye infection that could result in arc eye then cataract.	Provision of visor with protection for exposure to UV Rays. Screens to protect those people in the area.	Mostly effective	contractor	OHSAct

	Noise	Exposure to noise	Health	Noise induced hearing loss. This can start by threshold shift, followed by tinnitus and ultimately NIHL.	Correct hearing protection, Medical surveillance is carried out to screen employees accordingly. PPE awareness	Mostly effective	cotractor	OHSAct
	Defective electrical welding equipment	Use of defective equipment, tool inspection not conducted	Safety	Serious bodily injuries because of electrocution.	All electrical equipment are inspected before use. Welding equipment is not used in damp environment. The wet surfaces are drained off before any welding is undertaken.	Mostly effective	cotractor	OHSAct
	Poor ergonomics	Heavy lifting, Manual handling of material (physical ergonomics) when welding is carried out.	Health	Musculoskeletal disorder : Muscle sprains and strains resulting in back pains and/or shoulder pains.	Use of trolleys or cranes for heavy plates/sheets. Employees trained and competent to use the lifting equipment.	Mostly effective	cotractor	OHSAct
	Ash dust	Exposure to and inhalation of ash dust	Health	Lung infection, eye infection, skin allergies, nasal infection, skin infection	Daily cleaning and washing of plant PPE/dust masks, goggles, overall, gloves. Work team sessions. Tool box talks.	Mostly effective	cotractor	OHSAct
	Coal dust	Exposure to and inhalation of coal dust	Health	Lung infection, eye infection, nasal infection, skin infection. The disease that is caused by exposure to coal dust is Silicosis	Daily cleaning and washing of plant PPE/dust masks, goggles, overall, gloves. Work team sessions. Tool box talks.	Mostly effective	cotractor	OHSAct
Offloading and transfer pumps removal and replacement	Heat and steam	Exposure to and working in hot environments	Safety	Third degree burns that are fatal	PTW system. Proper and correct isolations are done. There is supervision while work is conducted. Two men rule applied. Life saving rules are adhered to. Job observations are carried out. Employees are provided with PPE.	Mostly effective	cotractor	OHS Act. PSR
Driving, Transport employees	Unfavourable road conditions	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Safety	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Driver risk evaluation/Defensive & advance driving training.	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR
	Night time driving	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Safety	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Driver risk evaluation/Defensive & advance driving training	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR
	Unfavourable weather conditions due to Mist/Fog/heavy rain	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Safety	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Driver risk evaluation/Defensive & advance driving training	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR
	Potholes on the road.	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Safety	Vehicle accidents which will result in multiple injuries and/or fatalities as well as property damage.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Driver risk evaluation/Defensive & advance driving training	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR
	Unfit road users, pedestrians and/or stray animals	Collision that result in accidents with multiple injuries and/or fatalities.	Safety	Collision that result in accidents with multiple injuries and/or fatalities.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Driver risk evaluation/Defensive & advance driving training	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR
	Driving vehicle	Fatigue that result in accidents. These may result in injuries and/or fatalities.	Safety	Fatigue that result in accidents. These may result in injuries and/or fatalities.	Awareness during SHEQ meetings/ tool box talks/ lessons learned/ road safety campaigns/ Defensive & advance driving training	Mostly effective	cotractor	Road traffic act, OHS Act. Vehicle Safety 240-69946. LSR

Myeza SP

Siboniso Myeza