

			TITLE		Reference No.:		KFV-SR-050																		
BASELINE RISK ASSESSMENT					Revision:		1																		
					Associated Documents:		KGA-067																		
NUCLEAR PROJECT MANAGEMENT -EXCITATION TRANSFORMERS-GEX																									
Department	Group	Act number	Activity / Product / Service / Process / System	Aspect	Hazard / Potential Incident	Impact	Risk Category	Initial Frequency	Initial Probability	Initial Severity	Initial Risk Value	Initial Risk Classification	Mitigation	Legal Requirements	Final Frequency	Final Probability	Final Severity	Final Risk Value	Final Risk Classification	Completed	Reviewed	Authorised	Date		
													Although captured in the mitigations below, prior to performing ANY activity, ALWAYS consider the following: <b>HP TOOLS</b> , i.e. self checking, pre-job / post job brief, peer checking, procedure use, place-keeping, questioning attitude, effective communication, coaching, handover and authorisation and knowledge; <b>OTHER CONTROLS</b> , i.e. monitoring, measurement & inspection; Operational control i.e. procedures; SHE programme; Engineering control			Applicable Legal & other requirements & applicable sections (Eg: National Environmental Management Waste Act no. 59 of 2008, Section 19); National water act, Section X; National Environmental Management Act, Section Y)									
													OPERATIONAL/ ENGINEERING CONTROL (i.e. bund wall, equipment, procedures)												
		ACT:1	LOGISTICS																						
NPM	GEX	1,1	DELIVERY OF TRANSFORMERS TO KNPS	DELIVERY	Incorrect load placement/material not being secured, materials falling on people.	Injuries	P	1.0	0.5	5.0	6.5	Medium Risk	Correct transportation to be utilized as per load requirements, materials handling guide :- refer to KGA-114. Always tie-down the load properly to avoid damages.	Ensure that materials/Equipment are secured correctly, Job observations,	Operator to have valid Driving licence/Drive Defensively and cautiously/ driver to be medically fit	National road traffic act 93 of 1996/ DMR 18 (11)	1.0	-1.0	2.0	2.0	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	SGR	1,2	DELIVERY OF PLANT AND EQUIPMENT TO AND FROM KNPS	DELIVERY	Logistics plan not in place/lifting plan not in place.	Lost time due to work stoppage/damage to plant and equipment	A	1.0	0.0	4.0	5.0	Medium Risk	Logistics plan to be in place and approved before hand, correct transportation to be utilized as per load requirements/ lifting plan needs to be in place and approved by client	Lifting and rigging program to be followed	Operator to have valid competency's/ Operators/Riggers to be certified by Eskom and have competency card.	KSA-132/ DMR 18 (11)	1.0	-0.5	2.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	ACT:2	ACCESS AND EGRESS ON KNPS																						
NPM	GEX	2,1	ON SITE EMERGENCY AND EVACUATION PLAN	ACCESS OF PERSONNEL	Emergency and muster procedure processes	Un-accounted personnel/trapped in dangerous area's	P	0.5	-0.5	5.0	5.0	Medium Risk	Muster supervisors. visible sign posting of muster station. Evacuation routes Identified and displayed.	Accountability list to be filled in and use to account for all employees in case of emergency	Familiarise with emergency response exercises and identification of different alarms to be adhered to	Major hazard installation regulations 6(1)(a-g)	0.5	0.0	2.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2,2	PERSONNEL USING STAIRS/LIFTS/GOODS LIFTS.	ACCESS OF personnel	Using Stairs without using hand rails/using lifts/ goods lift incorrectly	Fatality/serious injury	P	1.5	0.5	5.0	7.0	High Risk	Adhere to warning sign(s) displayed at staircases.	Job Observations. HP tools/always have 3 point contact when ascending or descending the stairs, Never wear safety harness in elevators	She talks/ make use of handrails and never run up or down a staircase	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1) GSR 2 (B)	1.5	-0.5	2.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2,3	PERSONNEL WALKING AROUND GENERAL AREAS OF KNPS	ACCESS OF personnel	Personnel not abiding to KNPS pedestrian crossings/walkways	Lost time injuries	P	2.0	0.5	4.0	6.5	Medium Risk	Walkways to be clearly marked	Pedestrians to use designated walkways	Be vigilant/2M/Tool box talks	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)/national road traffic act 93 of 1996	2.0	-0.5	2.0	3.5	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2,4	PERSONNEL WALKING AROUND GENERAL AREA'S OF KNPS	ACCESS OFPERSONNEL	Entering noise zones greater than 85db without correct ear protection	Hearing loss (NIHL)	P	2.0	0.5	4.0	6.5	Medium Risk	Adhere to sign posting's on site	Audiogram testing to be done regularly/regular noise surveys must be done by registered occupational hygienist to assess the noise levels	Wear correct PPE (earplugs). Ensure earplugs are correctly inserted into the ear. STAR and pre job briefing	NIHL Regulations 3,5,8,9 CR 7 (8)	2.0	0.0	0.0	2.0	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2,5	ACCESS & EGRESS BIOMETRIC (FINGER CLOCKING)	TOUCHING OF CONTAMINATED KEYPADS	Contracting/transmission of COVID-19	Illness or ultimate death if not quarantined	P	3.0	1.0	5.0	8.1	High Risk	Maintain 1 meter or more,social distance markings	Contractors to find alternative ways to register employees who are present at work (eg registers)	Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water.Wear mask all the time	World Health Organisation-WHO. Occupational Health and Safety Act No 85 Of 1993.Section 8 Ssection 14(a). Regulations for Hazardous Biological agent 5	2.0	0.0	4.0	6	medium Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2,6	DISPOSAL OF FACE MASKS	Incorrect disposal of face masks	Pollution to the environment	Damage to the environment and impact on plant and animal life	E	2.5	0.5	1.0	4.0	Low Risk	Adhere to KAE-012 procedure for hazardous and non hazardous waste disposal	Supervisor to monitor correct disposal/ all disposable mask to be disposed of in medical waste boxes	Environmental awareness through safety talks, job observations and respect to the environment	National Environment Management Waste Act No -59 OF 2002	2.5	-1.0	1.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23

NPM	GEX	2.7	WALKING AROUND SITE	WORKERS WALKING IN GROUPS,TALKING TO EACH OTHER AND NOT WEARING FACE MASKS	Workers exposed to being infected with Covid 19	Transmission of Covid 19	P	3.0	0.5	4.0	7.5	High Risk	Adhere to Covid19 Regulations, stated in the disaster management act 2002 Section 27(2)	Supervisor to monitor and observe workers if they are practising social distancing, and also approach and coach	SHE talks, job observations, wear appropriate PPE eg,face masks	Occupational Health and Safety Act No.85 of 1993 Section 14.DisasterManagement Act Regulation, Section 27(2)	3.0	-0.5	2.0	4.5	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	2.8	PERSONNEL WALKING AROUND GENERAL AREA'S OF KNPS	ACCESS OF PERSONNEL	Personnel being exposed to snakes and other dangerous wild life while at KNPS	Injuries	P	1.0	0.5	3.0	4.5	Low Risk	Observing of snake sign posting. Snake Catcher to handle snakes only. Contact JURINA LE ROUX on extension 1257 / 1258 or 083 6633 467	Apply 2M-Rule	SHE talks, Operating experience. It is important to know what different types of snakes look like (colour, size etc.) to assist medical Service or treating. Physician to know what anti-venom to administer. Call emergency services on extension 4222	Occupational Health and Safety Act,1993( Act. No.85 of 1993) Section 14. General Duties of Employee Subsection:(a)-(d) read with Section:21 General Prohibitions Subsection:( c)	1.0	-0.5	2.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	ACT: 3	FFD PROCESS																						
NPM	GEX	3,1	FFD VETTING OF PERSONNELL	ACCESS TRAINING FOR PERSONNEL	Personnel not doing prescribed FFD training	No access allowed resulting in injuries due to incompetency of employees	P	2.0	0.5	3.0	5.5	Medium Risk	Employees are required to complete all relevant FFD processes and courses	Assigned FFD coordinator to insure the employees are booked on the correct courses	All relevant FFD courses passes to gain access to site.	General Safety Regulations 2c(1)(2)	2.0	0.0	2.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	ACT: 4	DRIVING VEHICLES ON/INTO KNPS SITE																						
NPM	GEX	4,1	OPERATION OF VEHICLES ON KNPS SITE	VEHICLE OPERATION	Unroadworthy vehicle, incompetent Operator, Operator disregarding KNPS rules and regulations	Fatality	P	2.5	0.5	5.0	8.0	High Risk	Correct service intervals must be followed as per vehicle maintenance schedule.	Speed limit to be monitored on site. (Speed limit onsite 35Km/h)/ vehicle pre inspection checklist to be done.	Driver to have a valid South African drivers licence/Driver to be competent/ drivers to be medically fit	Construction regulation 23(1)(b)(d),ii./national road traffic act 93 of 1996	2.5	0.5	1.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	4,2	OPERATION OF VEHICLES ON KNPS SITE	VEHICLE OPERATION	Causing accidents onsite	Damage to property	A	2.0	1.0	4.0	7.0	High Risk	All drivers/Operators need to be medically fit and have physical proof of fitness certificate as per man job spec	All employees to be inducted and the validity of fitness checked.	Approved Annexure 3 by OH&S	Construction Regulation 7 (8)	2.0	0.5	2.0	4.5	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	ACT: 5	LIFTING/TRANSPORTING & RIGGING OPERATIONS ON KNPS																						
NPM	GEX	5,1	LIFTING OF TRANSFORMERS	LIFTING OPERATIONS	suspended load could drop due to incorrect safe working load.	Injuries	P	2.0	0.5	4.0	6.5	Medium Risk	Barricade area where there is a suspended load. approved rigging plan to be in place before any rigging	Work procedure/Supervision oversight required at all times during rigging task/Lifting equipment check-lists to be complete	PIT/Rigger training and authorisation.	DMR 18 (11)	2.0	-0.5	2.0	3.5	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	5,2	TRANSPORTING OF MATERIAL	TRANSPORTING OF MATERIAL TO SITE	Materials damaged due to incorrect load placement/material not secure.	Damage to plant and equipment	A	2.0	0.5	3.0	5.5	Medium Risk	Equipment to be tied down and loaded correctly to avoid damage	Driver to adhere to speed limit/Driver to insure load is secure before driving.	Valid competency and validation card	Construction Regulation 23(1)(b)(d),ii.	2.0	-0.5	2.0	3.5	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23
NPM	GEX	ACT:6	PERSONNEL USING SCAFFOLDING																						
NPM	GEX	6,1	USE OF SCAFFOLDING	UNSAFE ACCESS AND USE OF SCAFFOLDING	Slips trips and falls at same level	Injuries	P	3.0	0.5	3.0	6.5	Medium Risk	Insure green safety tag is on scaffolding and has not expired/2M	Pre job brief/Scaffolding inspections every 7 days or after inclement weather	Working at heights training. HP Tools. Toolbox talks. STAR 2M-Rule.Wear correct PPE as per job specific risk assessment	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)/ SANS 10085-1:2004/ GSR 2	2.0	0.0	1.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23

NPM	GEX	6,2	USE OF SCAFFOLDING	UNSAFE ACCESS AND USE OF SCAFFOLDING	Fall from heights	Fatality/Permanent disability	P	3.0	0.5	2.0	5.5	Medium Risk	Use safety harness	Pre job brief/Safety inspections	Working at heights training, HP Tools. Toolbox talks, STAR 2M- Rule. Wear correct PPE as per job specific risk assessment.	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)' SANS 10085-1:2004	3.0	-0.5	1.0	3.5	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	6,3	USE OF SCAFFOLDING	UNSAFE USE OF TOOLS WHILE WORKING ON SCAFFOLDING	Tools and materials falling	Damage to plant and equipment	A	2.0	0.5	4.0	6.5	Medium Risk	Setup drop zone/Use of tool lanyards	Pre job brief/Job observations	Working at heights training, HP Tools, Toolbox talks, STAR 2M- Rule and wear correct PPE as per job specific risk assessment.	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)' SANS 10085-1:2005	2.0	0.0	2.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	ACT: 7	PERSONNEL USING OF LADDERS																						
NPM	GEX	7.1	USING LADDER	UNSAFE OPERATION AND USE OF LADDERS (STEP and EXTENSION LADDERS)	falling off the ladder	Injuries	P	3.0	0.5	2.0	5.5	Medium Risk	Barricade work area/ pre job brief/ assistant to hold ladder	Supervisory and safety inspections/job observations// maintain 3 point contact	Wear appropriate PPE/ working at heights training.	Latest revision of Man Dir/ GSR 13A	2.0	0.0	2.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	ACT: 8	PERSONNEL USING ELECTRICAL TOOLS																						
NPM	GEX	8.1	GENERAL ELECTRICAL TOOLS	UTILISATION OF ELECTRICAL TOOLS TO INSTALL PLATES	Defective electrical tools	Serious injuries	P	2.5	0.5	3.0	6.0	Medium Risk	Insure electrical tools are in a good working condition and all safeguards are in place and in a good condition	Tool register and check list to be done	Wear appropriate PPE as per task specific risk assessment	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1) Management directive 009	2.5	-0.5	1.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	8.2	INSPECTING ELECTRICAL TOOLS	UTILISATION OF ELECTRICAL TOOLS TO INSTALL PLATES	Poor maintenance of electrical tools	Serious injuries	P	2.5	1.0	3.0	6.5	Medium Risk	Monthly tool inspections	Pre-job Brief/2M/STAR/Electrical tool register.	Basic electrical tool training/material handling/ Eskom CBA training to be done	Construction Regulation 24	2.5	-0.5	2.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	8.3	GRINDERS	UTILISATION AND MAINTENANCE OF ELECTRICAL TOOLS	Sparks from grinding	Property damage	A	2.5	0.5	2.0	5.0	Medium Risk	Fire blanket, fire extinguisher/screen in place (spark containment) hot works permit to be obtained from FRM/safe work procedures	Fire watch to be on job site, fire equipment checklist to be in place, supervision.	Task specific risk assessment, CBA training? Fire watch to be competent	Construction Regulation 9, Construction Regulation 8(7), OHSACT section 8 (2)(i)	2.5	0.0	2.0	4.5	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	8.4	GRINDERS	UTILISATION AND MAINTENANCE OF ELECTRICAL TOOLS	Grinder blade shattering suddenly	Serious injury	P	2.5	1.0	3.0	6.5	Medium Risk	Ensure grinder safe guards are in place/ correct cutting and grinding disc is used for the application/ grinder tool used to lock grinding blade	Electrical tool register and checklist to be completed/Pre-job brief 2M/STAR/Good housekeeping practice	Wear appropriate PPE as per task specific risk (Le Leather apron) assessment/Basic electrical tool training/ Eskom CBA traing to be done	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1) latest revision of Management Directive / EMR 10 Construction Regulations 24	2.5	0.0	2.0	4.5	Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	8.5	EXTENSION LEADS	UTILISATION AND MAINTENANCE OF ELECTRICAL TOOLS	Unsafe use of extension leads (over load circuit)	Injuries	P	2.5	-0.5	2.0	4.0	Low Risk	Extension leads not to be over loaded//If the lead is a reel type ensure reel is un-wound to minimize over heating.	Electrical tool register and check list to be completed/Pre-job brief	Wear appropriate PPE as per task specific risk assessment/2M/STAR/Good housekeeping practice	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1) Latest revision of Management Directive/ EMR 10 Construction Regulations 24	2.5	-1.0	1.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannai Jonnalagadda	2021-08-23
NPM	GEX	ACT: 9	PERSONNEL USING HAND TOOLS																						

NPM	GEX	9.1	HAND TOOLS	UTILISATION AND MAINTENANCE OF HAND TOOLS	Pinch points	Hand and finger injuries	P	2.5	1.0	2.0	5.5	Medium Risk	Maintenance of hand tools	Pre-job Brief/2M/STAR	Wear appropriate PPE as per task specific risk assessment/Fitter competency card	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1) Latest revision of MAN-DIR	2.5	0.5	1.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	2021-08-23
NPM	GEX	ACT: 10	REMOVAL AND INSTALATION OF CABLES																						
NPM	GEX	10.1	CABLE WORK	UNSAFE REMOVAL OF CABLES	Sharp jagged edge's	Injury	P	2.5	0.5	2.0	5.0	Medium Risk	Use of Permit To Work (PTW) procedure	2M/Tool box talks/Pre-job briefing	Competent person/wear appropriate PPE as per task specific risk assessment	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1), Latest revision of MAN DIR 009.	2.5	-0.5	1.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	2021-08-23
NPM	GEX	10.2	CABLES REMOVAL	REMOVAL OF CABLES	Slips trips and falls at same level	Injury	P	2.5	0.5	2.0	5.0	Medium Risk	Make use of designated storage areas	HP tools, job observations and housekeeping.	Competent person/ wear appropriate PPE as per task specific risk assessment	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1), Latest revision of MAN DIR 009.	2.5	-0.5	1.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	2021-08-23
NPM	GEX	ACT:11	PERSONNELMANUAL HANDLING MATERIALS																						
NPM	GEX	11.1	MATERIALS HANDLING	MANUAL HANDLING OF SCAFFOLDING POLES AND OTHER MATERIAL	Incorrect use of ergonomic practice	Injuries	P	2.5	0.0	3.0	5.5	Medium Risk	Materials handling guide (refer to KGA-114)	Safety Officer to complete adequate inspections/ self checking and assess weight(s) and size(s) of packages	Apply proper lifting techniques by bending knees slightly when lifting object. Use appropriate Personal protective equipment (PPE) (eg. Kidney belts)	Latest revision of Man Dir. Materials handling training. Eskom Guide KGA-114	2.5	-0.5	1.0	3.0	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	2021-08-23
NPM	GEX	ACT:12	EXPOSURE TO ELECTRICITY																						
NPM	GEX	12.1	ELECTRICAL EXPOSURE	UNSAFE USE OF ELECTRICAL EQUIPMENTS	Electrical shock	Fatality	P	2.5	1.0	5.0	8.5	High Risk	Isolate and lock-out, PTW process	HP tools	Wear correct PPE as per mandatory sign posting and task specific risk assessment	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)/EMR 22, Construction Regulations 24, Latest revision of MAN DIR 009.	2.5	-0.5	2.0	4.0	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	2021-08-23
NPM	GEX	ACT:13	OFFICE WORK																						
NPM	GEX	13.1	OFFICE	WORKING IN OFFICE	Working on computers, sitting position practicing poor ergonomics at work station	Work related upper limb disorder, repetitive strain	P	2.5	1.0	3.0	6.5	Medium Risk	Use of footrest/correct work station layout/ergonomically friendly chair	Ergonomics assessment/job observations/avoid long working sessions	SHE induction and awareness	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) Regulation 8(1)	2.5	0.0	2.0	4.5	Low Risk	A Khudunyane	Wade Bolters	Kiranmai Jonnalagadda	

NPM	GEX	ACT:14	WASTE																							
NPM	GEX	14.1	WASTE DISPOSAL	WASTE DISPOSAL	Incorrect disposal of hazardous and non hazardous waste and scrap from the old transfoemers	Damage to environment	E	2.5	-0.5	2.0	4.0	Low Risk	Designated waste bins as per waste type. Approved waste management plan. Adhere to KAE-012 Procedure for hazardous and non hazardous waste and scrap disposal.	SHE Rep/ Supervision to monitor	Toolbox talks on Environmental Management.	NEM Waste Act No:59 of 2008	2.5	-1.0	1.0	2.5	Very Low Risk	A Khudunyane	Wade Bolters	Kirannal Jonnalagadda	2021-08-23	
				Compiled By : ALIANA KHUDUNYANE Sign: <i>Alia Khudunyane</i>						Reviewed By : Wade Bolters Sign: <i>Wade Bolters</i>						Approved By <i>Kiranmai Jonnalagadda</i> Kiranmai Jonnalagadda Sign						Date: 2021-08-23				

