

PTW NO-	Department:- Civil	Equipment	Location:- Unit # 3&4	Job description: Coal Settling Pit at Manoharpur Yard.			
JSA performed by:	Signature	Review & Apprd. by	Signature	Date of Issue	Date of revision		Revision No-

HAZARD TEXT/TYPE (For reference to identify the Hazard type)

PHYSICAL HAZARDS	PHYSICAL HAZARDS	PHYSICAL HAZARDS	ELECTRICAL HAZARDS	CHEMICAL/ GAS HAZARDS	EXCAVATION	OTHERS	
Noise	Fall from height	Force (Push/Pull)	Shock/ Electrocution	Flammable/ Explosive substances	Collapse/Sliding	Fire	
Radiation	Fall (Slip/Trip)	Caught in/on or between	Static electricity	Inhalation of toxic fumes	Underground live cable / Live pipeline damage	Heavy Wind/Rain	
Confined space	Fall down/below	Struck by/against	Arcflash/ blast	Ingestion/Absorption	ERGONOMICS	Dust exposure	
Exposure to pressurised Steam/Air	Fall of Objects from height	Extreme weather (Hot/Cold)	BIOLOGICAL HAZARDS	Body/Eye Contact	Poor Posture	Oil spill	
Contact with Hot surface	Contact with moving parts	Poor illumination	Snake/Insect bite/Virus infection	Spillage	Repeatative motion	Human factor	
PPEs to be used	Safety Helmet, Safety Shoe, Safety goggle, Hand glove, Safety belt etc.						
Tools required							

Important Note- While deciding hazard control measures, consider hierarchy of hazard control steps in order of preference.

SEQUENCE OF BASIC STEPS	SAFETY, HEALTH & ENVIROMENT HAZARDS	SAFE JOB STEPS / HAZARD CONTROL MEASURES				Are control Measures adequate to mitigate the risk
		Elimination/ Substitution	Engineering	Administrative	PPE	
Work start-up & obtaining PTW	1.Unauthorised work. 2. Invalid permit . 3. Lack of competency 4. Lack or poor communication 5.Haste or shortcut	Access should be free without obstacle.	Responsible person will conduct inspection, monitor the work activities and have to ensure safety standards and procedures are strictly adhered	Obtain a valid work permit before starting the job. Adequate Supervision for the task to be done. Be attentive on the job.	Basic PPEs used	Supervisor must ensure that all work activities are carried out by competent personnel. Before start of the activity, Conduct pre-job briefing and have close monitoring for supervision.

Vehicles & Machinery Movement	1-Bodily injury to the road users/drivers/ helper. 2-Material/ equipment damage.	Road condition to be even/follow safe route.	Speed limit near the yard and in the working site should not be more than 20 KM/H.While reversing the trucks, Machinery flag man shall be available and away for prior guiding the vehicles.	Skilled & trained driver with Valid DL to be deployed.Vehicle shall be checked prior to start the work. Inspect the vehicle on daily basis through checklist & maintain the record. Vehicles should be in good working condition with back up alarms functioning.	Shoes, helmet, goggles, vest, face shield & hand glove , Nose mask.	Don't park the vehicle on passage of vehicle movement. Vehicle shall be checked prior to start the work.
Excavation Work	1.Collapse of soil. 2. Under ground Utilityline damage. 3. Hit by banksman. 4.Electrical hazard.	Hard barrication to be provided. Clear access .Ensure lighting arrangement provided. Excavation soil kept away 2.0 m from the edge of the pit.Shoring to be provided	Equipment physical condition and valid documents to be ensured. Authorised operator deployed. Excavation during banksman provided .	Area clearance electrical and all utility line must be checked. PTW system follows. Slope maintain as per approved drawing.	Basic PPE used.	
SHUTTERING WORK.	1.Physical hazard. 2.During shuttering fixing fall of shuttering matrial. 3.Electrical shock.	Working area to be cleared from un wanted materials. Shuttering material to be stacked properly .	Shuttering, cutting machine physically checked. Skilled work man deployed. Cutting machine power cable proper insulated. Connected 30ma elcb must.	as per drawing procedure follows. PTW system and daily PJB to be conducted before activity.	Basic PPE used.	During shuttering, fixing safe distance should be maintained. Wooden harmer or plastic grip hammer should be used.
Concrete Work	1.Physical injury. 2.Slip & trip .3.concrete enter eye.4.Fall of concrete. 5.Topple vehicle	Working area access should be clear. Boomplacing area to be labelled.	Skilled mason deployed. Area corden of. Boom and miller condition physically ensured. Authorised operator deployed. Banks man provided.	PTW system follows. Conduct PJB job specific must. Properly supervised.	Basic PPE used.	
Steel Reinforcement work	1.Fall of material. 2. Hit by rod while bending & shifting. 3.Crush between materials.	Access egress clear should be free of material. Secure the rod properly while shifting and fixing	Protruding rebar shall be protected with mushrumcap. Proper checked cutting machine before activity.	PTW system follows. Conduct PJB before starting the job with Proper supervision.	Basic PPE used.	Shoulder pad must be used during Rod shifting.
Plastering Work	1.Fall of person & material. 2. Physical injury.	Working platform and access and egress to be provided.	skilled mason deployed.	PTW system follows. Proper supervision.	Helmet, Shoes, rubber hand gloves, goggels, Jacket.	

Brickwork	1.Physical injury. 2.Fall of brick. 3. Ergonomic hazard.	Working area should be cleared. No stacking of huge bricks on platform.	Area must be barricaded. Skilled person should be deployed	PJB briefing on daily basis	Basic PPE used.	
REBAR CUTTING WORK (Cutting m/c)	1.Wheel damage, cracks etc. 2. Electric shock, 3.Breaking of wheel. 4. Fire hazard. 5. Serious cut injury. 6. Noise	Before starting of cutting make sure the area is clear of all types of combustible materials .	Cutting wheel shall be from reputed brand of specified diameter and quality. Check physical damage to the wheel before mounting.Check expiry date of cutting wheel. Ensure the connection for cutting	Only skilled and trained worker have to perform the cutting the rebar.	Shoes, helmet, goggles, vest, face shield & Leather hand glove	Make sure guards are fitted to all moving parts. Maintain the equipment such that it reduces noise level.
Hot Work(Gas cutting,Welding)	1. Fire 2. Chances of shock 3. Burn 4.Physical injury	Remove all combustible materials before starting of work. Side is covering with fire blankets or GI sheets	Ensure the use of flashback arrester at cutting torch and LPG/DA Cylinder. ensure the connection for welding machine through 30mA ELCB & body earthing.	Only skilled worker have to perform the welding, cutting activity.Trained fire watcher to be deployed for all hot work activity.	Shoes, helmet, goggles, vest, face shield & Leather hand glove , Nose mask.	Fire extinguishers and sand bucket to be at work place.Cylinder kept in trolley and away from hot work activity.
Covid -19 precaution	1.Lungs infection	1.Sanitization		1.Regular hand wash. 2.Hand sanitizing time to time 3.Maintain Social distancing. 4. work area to be Sanitized. 5. Office chair ,table, two wheeler ,four wheeler vehicle Sanitizing 6.Training	Nose mask is mandatory	
Snake bite	1. Body infection 2. Death	1. Area survey 2. Housekeeping		1.Training (PJB/OJT) 2.carbolic Acid spray	All PPEs are mandatory	
DEWATERING	1.Electricution 2. Physical Injury	Access egress clear should be free of material. Joints cable should be avoided.	Main supply power cable should be double insulated. All the elctrical equipments should be through RCCB.	Permit to work system is to be followed. Experience supervisors to be assigned. Cables must be overheaded. Cable joints to be avoided.	Helmet. Shoes.rubber handgloves. goggels. Jacket, Gum boot etc.	Rotatory part to be gaurded. Illumination system to be installed.
Lifting and Placing of Hume pipe by Equipment	1- Serious injury. 2-Material damage.	Ensure the ground surface rigidity before Place the lifting equipment.	Adequate Supervision for the task to be done. Be attentive on the job.	Only skilled worker have to perform this activity.	Basic PPE used.	Double Tag lines should be held properly to avoid unwanted movement of the material.

