

Format No: ER 5/10– F2, JOB SAFETY ANALYSIS (JSA), IB THERMAL POWER STATION, OPGC							
Serial No.	Department	Equipment	Location	Job description: Structural stability test of CHP buildings and Structure			
			CHP	structure repair & Hopper liner removal			
JSA performed by:	Signature	Reviewed & Approved by	Signature	Date of Issue	Date of revision		Revision No-
				09.11.2019			
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/ Electrocutation	Flammable/ Explosive substances	Collapse/Sliding	Fire	
Radiation	Fall (Slip/Trip)	Caught in/on or between	Static electricity	Inhalation of toxic fumes	Underground live cable damage	Heavy Wind/Rain	
Confined space	Fall down/below	Struck by/against	Arcflash/ blast	Ingestion/Abso rption	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							
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 (Yes/No)
			Elimination/ Substitution	Engineering	Administrative	PPE	
test sample collection of TRH hopper	Isolation of Equipments form all its source of energy	Shock/ Electrocutation/ Contact with moving parts	N.A	Keep safe distance other running equipment at working time.	Isolation of TRH-1A or TRH 1B Conveyor, and PF1,PF2 or PF-3, PF-4, Train Barecade at MR-1A & MR-1B to be made. LOTO procedure to be followed. PTW to be issued.	GENERAL PPE USE	YES
		Poor illumination	N.A	Use hand bulb with cage	N.A	Safety Goggles,Dust mask	YES
	core Cutting	Fauilure of Tools/Takels	N.A	N.A	Use tested & certified tools and before start work physically verify all tools at site	use safety goggles & dust mask	YES

	Flying spark causing damage to eye,		man must wear face shield & other crew member must wear safety goggles during core cutting work	N.A	use safety goggles & dust mask	YES
Shifting of Material	Falling of material	N.A	one person is to be deployed for not allowing person to use the stair case while shifting job is carried	N.A	Use Rubber hand gloves & Safety goggles.	YES
	Struck against	N.A	Carefully shift the scaffolding material. Do not throw, shift it by hand to hand and one by one method	N.A	Use Rubber hand gloves & Safety goggles.	YES
		N.A	Use hand rails and mid rails of stair case and remove the obstruction materials from walkway and working area.	N.A	Use Rubber hand gloves & Safety goggles.	YES
Use Tools/Takels	Failure of Tools/Takels	N.A	N.A	Use certified tools and before start work physically verify all tools at site	hand gloves, Safety Goggles, Dust mask	YES
Scaffolding Erection	Fall hazard	N.A	Scaffolding components to be ensured healthy. Put Red colour tag at the time scaffolding erection.	Certify the platform before use from Authorised person	Use Rubber hand gloves & Safety goggles.	YES
		N.A	Ensure anchor point of full body harness must be rigid enough.	N.A	Use full body harness.	YES
	Fall of Objects from height	N.A	Securely hold the scaffolding material during its shifting for erection of scaffolding. Use manila rope for shifting of scaffolding material from bottom to top. Do not stand under the shifting material.	Barricade the work area.	Use Rubber hand gloves & Safety goggles.	YES

	Fall/ slip/ Trip	N.A	Clean the bottom of shoes from grease and dirt or slippery type substance before climbing up and down.	N.A	Use Rubber hand gloves & Safety goggle.	YES
Dismantalling of Scaffolding material	Fall hazard	N.A	Scaffolding components to be ensured healthy. Put Red colour tag at the time scaffolding erection.	Certify the platform before use from Authorised person	Use Rubber hand gloves & Safety goggle.	YES
		N.A	Ensure anchor point of full body harness must be rigid enough.	N.A	Use full body harness.	YES
	Struck by/against Tools and tackles.	N.A	Care fully shift the materail. Transfer scaffolding components hand to hand or use manila rope. Do not throw the materilas.	N.A	Use Rubber hand gloves & Safety goggle.	YES
	Fall of Objects from height	N.A	Use Manila ropes for shifting of material and tie the tools like spanner & material with rope in hand. No person is allowed to stand under the dismantalled .	Barricade the work area.	Use Rubber hand gloves & Safety goggle.	YES
	Slip hazard	N.A	Clean the shoes from slipper type substances.	N.A	Use Rubber hand gloves & Safety goggle.	YES
	Poor illumination	N.A	Use hand bulb with cage	N.A	use safety goggles & dust mask	YES
	Shock	N.A	Use extension board fitted with RCCB.Physically verify the condition of cable insulation & board before start work.	N.A	Use hand gloves for handling hand bulb	YES

