

Format No: ER 5/10– F2, JOB SAFETY ANALYSIS (JSA), IB THERMAL POWER STATION, OPGC							
Serial No.	Department	Equipment	Location	Job description:			
	Main Plant Civil		Main Plant	AMC for Cleaning & Housekeeping of Main Plant & CHP Area OPGC-II for 2025-27			
JSA performed by:	Signature	Reviewed & Approved 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	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/Absorption	ERGONOMICS	Dust exposure	
Exposure to pressurised Steam/Air	Fall of Objects	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	Repeattative motion	Human factor	
PPEs to be used	Safety helmet, shoe, hand gloves, earplug, dustmask, goggles.						
Tools required	Phowrah, belcha, gainti etc						
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	
1) Excavation of earth manually / mechanically(JCB)		1) Contact with live cable/equipment may cause shock/electrocutation	na	White marking of the excavated area to be done.	Excavation Permit/ clearance may please be taken before starting of excavation.	na	Yes
		2) Fall (Slip/Trip)	na	Work site shall be cleaned properly.	na	na	Yes

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	
	3) Struck by/against	na	na	Deploy trained and authorized workmen, operator for the Machine. One supervisor to be present to carry out the job. Signal man to be deployed along with red and green flag.	Use safety helmet, shoe, hand gloves and googles.	Yes
	4) Poor posture	na	Work safely and take rest in between.	na	na	Yes
	5) Fall (Down/Below) after excavtion	na	Barricade the excavted area after excavation.	na	na	Yes
	6) Hand injury	na	na	Workers shall be instructed to work carefully.	na	Yes
	7) Contact with mobile equipment	na	na	No person is allowed to work near/ under the boom of JCB machine. Work area to be barricaded.	na	Yes
	8)Traffic hazard	na	na	Experienced opertor to be deployed. Speed limit of vehicle is 20 KM/Hr. Don't over load.	na	yes
2) Loading, unloading, using trolley, bobcat and tractor for disposing of ash debris to designated location.	1) Struck by against	na	Be alert always, work carefully.	Deploy authorized and trained workmen, operator for the job. One supervisor to be present to carry out the job. Signal man to be deployed along with red and green flag.	Use safety helmet, shoe, hand gloves and googles.	yes
	2) Poor posture during loading, unloading, trolley using	na	na	Take rest in between, avoid bad postures.	na	yes
	3) Contact with mobile equipment	na	na	No person is allowed to work near the mobile equipment operatopn area. Work area to be barricaded.	na	Yes
	4) Traffic hazard	na	na	Experienced opertor to be deployed. Speed limit of vehicle is 20 KM/Hr. Don't over load.	na	yes

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	
3) Sweeping the floor and cleaning the cub webs of rooms	Exposure to dust while cleaning	na	Sprinkle water before sweeping to minimize the dust hazard	na	Use safety glass, dust mask & hand gloves	yes
4) Sweeping and cleaning of floor & wet moping	Fall (Slip/Trip)	na	na	Use caution board "wet floor" while water washing floors to warn others	na	yes
5) Cleaning activities/Sanitary works in noise pollution areas	Exposure to dust & noise	na	na	Use dust mask & ear plug and take rest few times in noise provided area during cleaning	na	yes
6) Cleaning of toilets	Exposure to micro organisms/bacteria during cleaning or repair of toilets	na	na	Use hand gloves & wash the hand in detergent/soap after cleaning.	na	yes
7) Cleaning of equipments in boiler, TG and auxillaries	Fall (Slip/Trip) due to oily surface	na	na	Use hand gloves and clean the oily surface with cotton. Keep the signage at working place.	na	yes
	Exposure of dust & noise	na	na	Use dust mask & ear plug	na	yes
	Contact with hot surface or moving parts	na	na	Use all PPEs as mentioned above and barricade the area to avoid contact of body parts with any hot or moving equipments. Take PTW.	na	yes
	Fall of objects from height	na	na	Use all PPEs as mentioned above. Before execution of work under any structure or equipment, the supervisor should be look after the safety aspects.	na	yes
	Fall from height	na	na	Use full body harness	na	yes
	Exposure to hot air/water/steam/hot oil	na	na	The area should be barricaded, the work should be executed in presence of supervisor.	na	yes
8) Cleaning of floors by Scruber , equipments inside Panel rooms	Contact with panels, Electric shock hazard, Flash blast	na	Deployed trained workmen .	Cleaning of Electrical panel rooms shall be carried out in presence of Electrical person only.	na	yes

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												
9) Loading/unloading of Hydrogen cylinder	Fall (Slip/Trip) & Traffic hazard	na	Deployed trained workmen .	Clean the working path way properly. Be active.	na	yes											
10) Cutting/cleaning of grass, bush by manually/using machine	Biological hazard	na	Deployed trained workmen .	Work very cautiously, don't enter inside bush area without taking precautionary measures. Use a long stick to hit the bush area before enter inside.	na	yes											
Emergency Safety Measures (Rescue/Fire Brigade etc):		Emergency Contacts-Main Control Room- 222, 233,244, Fire- 777, 222257, Ambulance- 248/337, Hospital-666															
Overall Job Risk Category- (High/Medium/Low) :	Medium																
JSA Review during PJB:																	
Pre Job Briefing (PJB) is applicable to all persons involved with the task.																	
Pre Job Briefing (PJB) Acknowledgement: I undertake that the JSA is communicated to me effectively																	
Name	Agency's name	Signature															