

Format No: ER 5/10- F2, JOB SAFETY ANALYSIS (JSA), IB THERMAL POWER STATION, OPGC

Serial No.	Department	Equipment	Location	Job description:			
	Facility Management	ITPS colony	ITPS colony	AMC for Cleaning and housekeeping work at ITPS colony.			
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 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/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 shoes, hand gloves ,safety helmet, Nose mask, Ear plug/muff, Safety goggles, reflective vest, etc.						
Tools required	broom,mop,toilet brush,road sweeping machine,grass cutting machine,bucket,tractor with trolley,vaccum cleaner,Hoe, pick axe, wood axe,spade, digging bar, measuring box, head pan, masonry trowel, circular saw, float, ladder,						
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	
		Elimination/ Substitution	Engineering	Administrative	PPE		
Cleaning and sweeping of residential and non residential buildings in ITPS colony.	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes	
	Dust exposure			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes	
	Poor Posture			Take Rest between the job. Do not overstretch your body. Keep in mind about your body limits.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask.	Yes	
	Electrocutation			Ensure the insulation of cavum cleaner machine and its cable. Ensure that the power source is from a 30mA sensitive RCCB.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes	
Collection, segregation and disposal of all kitchen waste from residential and non	Fall down/below from pick up truck.			Do not stand on the carrier of the truck while the vehicle is in motion.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask.	Yes	
	Fall of gabage waste/PVC dustbin during loading on pick up truck.			Do not try to lift the full dustbin, partially empty the dustbin and load it manually on to the garbage truck.	Safety shoes, rubber hand gloves ,safety helmet, safety goggles, nose mask	Yes	
	Inhalation of toxic fumes from the garbage.			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, rubber hand gloves ,safety helmet, safety goggles, nose mask	Yes	
Cleaning inside and outside area of storm water drains.	Dust exposure			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes	

SEQUENCE OF BASIC STEPS	SAFETY, HEALTH & ENVIROMENT HAZARDS	SAFE JOB STEPS / HAZARD CONTROL MEASURES				Are control Measures adequate to
		Elimination/ Substitution	Engineering	Administrative	PPE	
	Snake/ insect bite.			Proper inspection of the inspection chamber/manhole for any snake /insect, where cleaning work is to be done. Use long stick for inspection. Do not try to remove the snake/ insect on your own, please infrom the supervisor/autorised person.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
Clearing and maintaining any chokes in inflow& outflow of manholes, inspection chambers.	Falling in to the deep manhole.			Using proper FRP ladder to access the manhole.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Inhalation of toxic fumes			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Confined space			Confined space permit should be ensured before starting of job	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Snake/ insect bite.			Proper inspection of the inspection chamber/manhole for any snake /insect, where cleaning work is to be done. Use long stick for inspection. Do not try to remove the snake/ insect on your own, please infrom the supervisor/autorised person.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
Cleaning and sweeping of roads using sweeping machine.	Dust exposure			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Struck by any moving vehicle on the road.			Only authorised operator should be allowed to operate the sweeping machine.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
Cleaning of chajja and roof terrace.	Fall of ladder/platform		Ensure that the ladder/platform should be placed on a flat and rigid surface.	Ensure healthiness of ladder and its rungs before work. The ladder/platform should be placed on a flat and rigid surface.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	
	Falling of workmen from height.		Ensure that the ladder/platform should be placed on a flat and rigid surface.	Use A-type FRP Ladder and one person must be holding the ladder at the time of climbing/decending. Have a firm grip on the ladder/platform and maintain a 3-point contact while climbing/decending on the ladder/platform. In case of platforms, ensure that top rail and midrails are healthy and strong.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes

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Trimming of trees and cutting down dead trees.	Fall of ladder/platform		Ensure that the ladder/platform should be placed on a flat and rigid surface.	Ensure healthiness of ladder and its rungs before work. The ladder/platform should be placed on a flat and rigid surface.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Falling of workmen from height.		Ensure that the ladder/platform should be placed on a flat and rigid surface.	Use A-type FRP Ladder and one person must be holding the ladder at the time of climbing/decending. Have a firm grip on the ladder/platform and maintain a 3-point contact while climbing/decending on the ladder/platform. In case of platforms, ensure that top rail and midrails are healthy and strong.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	struck by falling tree/ branch.			barrication of entire area where trimming acvtvity is to be done .	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
cutting of wild growths and grasses by petrol operated grass cutting machine.	Contact with moving blade of the grass cutting machine.			Keep distance from the blade and always use guard for the blade during operation of machine. Only experinced grass cutter should be operating the machine.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Dust exposure			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Struck by moving vehicle			Have a 360 degree vision and be alert about the moving vehicle on road . Always wear reflective vest during work.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	
	Body/Eye injury			Keep distance from the blade and always use guard for the blade during operation of machine. Only experinced grass cutter should be operating the machine. Wear safety goggles during work.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	
Tractor loading and unloading for shifting of debris leaves,grass, shrubs,tree trunk and excavated earth to a specified location.	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body eye conact/ hand injury			Engage inline experienced work person, Use healthy and tested Tools.Use safety goggles to avoid any foreign material to go inside your eye.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Dust/Ash/fumes			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes

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		Elimination/ Substitution	Engineering	Administrative	PPE	
	Falling of Object from height			Proper supervision to be done, restrict unauthorized entry to the workplace.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Poor Posture			Take Rest in between the job. Do not overstretch your body. Keep in mind about your body limits.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
Excavation for construction of inspection chamber.	Electrocution/Shock from underground/burried cables			Ensure the proper isolation and put local LOTO on the RCCB/Main switch. Ensure zero voltage before starting the job. Use insulation mat while doing isolation.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body eye conact/ hand/leg injury while digging/manual excavation			Engage inline experienced work person, Use healthy and tested Tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Poor Posture			Take Rest in between the job. Do not overstretch your body. Keep in mind about your body limits.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Collapse/sliding of soil			Keep the excavated soil at a distance of 1 mtr from the excavated pit/trench. Barricade the area of work.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	
	Dust/Ash/fumes			Keep dust/fume mask with you. Use wherever needed.Check, whether the filters of the mask are clean before using. Use clean masks.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Fall of person inside excavated pit/trench			Barricade the working area with hard barrication. Use caution tapes and barriers wherever required.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
Dismantling of brickwork and cement concrete of old inspetction chamber	Body injury (Slip/trip)			Have a 360 degree vision and be alert about the area of work. Use proper and healthy tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Body eye conact/ hand injury			Engage inline experienced work person, Use healthy and tested Tools.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Poor Posture			Take Rest in between the job. Do not overstretch your body. Keep in mind about your body limits.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	Yes
	Falling of Object from height			Proper supervision to be done, restrict unauthorized entry to the workplace.	Safety shoes, hand gloves ,safety helmet, safety goggles, nose mask, ear plug/muff	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					
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				