

HAZARD IDENTIFICATION AND RISK ASSESSMENT & REGISTER

TASK/ACTIVITY/PROCESS NAME:	RAISE FLOOR INSTALLATION	DEPARTMENT/AREA:	COA
RA Number:	01	DATE:	2/3/2024

SEVERITY / CONSEQUENCE (Impact/Hazard Effect) (Where an event has more than one ' Loss Type ', choose the ' Consequence ' with the highest rating)

Loss Type Additional "Loss Types" may exist for an event: Identify & rate accordingly	(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
(S/H) Harm to People (Safety/Health)	First Aid Case/Exposure to Minor Health Risk	Medical Treatment Case/Exposure to Major Health Risk	Loss Time Injury / Reversible Impact on Health	Single Fatality or Loss of Quality of Life / Irreversible impact on Health	Multiple Fatalities / Impact on Health Ultimately, Fatal
(E) Environmental Impact	Minimal environmental harm incidents in the workplace	Material Environment harm (RST)	Material Environment harm (RST) Serious environmental harm incident (RMT)	Major environmental incident (RLT)	Significant ecological harm – Incident Irreversible
(BI/MD) Business Interruption / Material / Fire Damage & Other Consequential Losses	No disruption to operation / 1000 SR to Less than 10k SR	Brief Disruption to Operation / 10k SR to Less Than 100k SR	Partial Shutdown/100k SR to Less than 1M SR	Partial Loss of Operation/1M SR to Less than10M SR	Substantial or Total Loss of Operation / 10M SR and more

LIKELIHOOD	Examples (Consider Near-Hits as well as actual events)	RISK RATING / PROFILE				
(5) ALMOST CERTAIN	The unwanted event has occurred frequently: Occurs in order of (1) or more per year & is likely to reoccur within one year	5 (L)	10 (M)	15 (H)	20 (Ex)	25 (Ex)
(4) LIKELY	The unwanted event has occurred infrequently: Occurs in order less than once per year & is likely to reoccur within 5 yrs.	4 (L)	8 (M)	12 (H)	16 (Ex)	20 (Ex)
(3) POSSIBLE	The unwanted event has occurred in the business at some time or could happen within ten years.	3 (L)	6 (L)	9 (M)	12 (H)	15 (H)
(2) UNLIKELY	The unwanted event has occurred in the business at some time or could happen within 20 years.	2 (L)	4 (L)	6 (L)	8 (M)	10 (M)
(1) RARE	The unwanted event has never been known to occur in the business, or it is doubtful it will occur within 20 years.	1 (L)	2 (L)	3 (L)	4 (L)	5 (L)

RA TEAM (Names)	DESIGNATION	SIGNATURE	RISK	RISK LEVEL	GUIDELINES FOR RISK MATRIX
	Project Manager		21 to 25	(Ex) - Extreme	Stop operation and review controls- Eliminate, avoid risk & implement high priority action plans
	Site Manager		13 to 20	(H) - High	Proactively manage & implement specific controls/action plans-Review after 7 days
	Safety Engineer		6 to 12	(M) - Medium	Actively manage & monitor – Additional controls is advised & review after 14 days
	QA/QC Civil Engineer		1 to 5	(L) - Low	Risk acceptable – Monitor & manage as appropriate with frequent review

Reviewed by:		APPROVED BY / MANAGER or SUPERVISOR		NEXT REVIEW	1/3/2025
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Identify the hazard in the given task and assess the actual site condition. Provide a plan to eliminate or control all identified risks.

HAZARD IDENTIFICATION / تحديد المخاطر		CONTROL / وسائل التحكم	RISK ASSESSMENT / المخاطر تم	RISK REDUCTION ACTION PLAN / خطة العمل لتقييم المخاطر								
Item # / العنصر	Workplace/ Activity/ Process/ Equipment/ materials / للمعمل/المعدات/ المواد موقع في	Hazards / الخطار	Risk Issue (Possible Incident) (What can go wrong) (Accident/ Ill health to person, fire or property loss) / المخاطر المحتملة /	Existing Controls / وسائل التحكم المتوفرة	RISK ASSESSMENT			RISK REDUCTION ACTION PLAN			Follow up By Whom (Name) & By When (Date) / المعنية بالتنفيذ (التاريخ) /	Controls Implemented / تم / (Yes / No) / نعم / لا
					Consequence	Likelihood	Ranking	Consequence	Likelihood	Risk Ranking		

		<ul style="list-style-type: none"> Unauthorized work to be performed within a defined location and boundary 	<ul style="list-style-type: none"> Accident resulting in severe injury or death to worker Significant property and appurtenances damage Loss of production Significant cost due to damages Governmental violation Environmental complaint 	<ul style="list-style-type: none"> Permit to Work shall be obtained as a pre-requisite to perform work Work shall not be started until a duly approved Permit to Work is available at the site and that Safety Toolbox meeting was conducted A safe work practice shall be implemented to reduce the possibilities of accident/incident Permit Receiver and Permit Issuer shall visit together at the site to ensure that workplace hazards are adequately identified and mitigating measures shall be established Permit to Work shall be displayed at the worksite Permit Receiver shall not leave the area for the the whole duration of the work Work shall not proceed without the presence of a n approved Permit to Work with the Permit Receiver overseeing the activity Permit Receiver shall account for all workers under his Permit to Work before the start of work 	3	3	9	<ul style="list-style-type: none"> The Site Manager, Supervising Engineer, a n d Foreman shall designate a Permit Receiver competent enough to take responsibility for securing the Permit to Work Permit Receiver shall be trained and authorized by the Manager to receive a Permit to Work Permit Receiver shall be responsible for overseeing the safety of all workers under his Permit to Work Manager, Supervisor, Foreman and all workers shall adhere to all requirements outlined in the Permit to Work, Risk Assessment, Method Statement, Job Safety Procedure, and other relevant safety practices and standards All workers shall attend the toolbox meeting daily conducted by the Supervising Engineer, Foreman, and Permit Receiver All workers attending the toolbox meeting shall sign on the attendance sheet attached to the specific Permit to Work 	3	1	3	Permit Receiver/Issuer/HSE 07-02-24	yes
		<ul style="list-style-type: none"> Uncontrolled personnel entering a restricted location 	<ul style="list-style-type: none"> Significant cost due to damages 	<ul style="list-style-type: none"> Permit Receiver shall account for all workers under his Permit to Work before the start of work 	3	3	9	<ul style="list-style-type: none"> All workers shall attend the toolbox meeting daily conducted by the Supervising Engineer, Foreman, and Permit Receiver 	3	1	3	Permit Receiver/Issuer/HSE 07-02-25	yes
1	Obtain Permit to Work	<ul style="list-style-type: none"> Unidentified hazards with unplanned safety mitigating measures 	<ul style="list-style-type: none"> Governmental violation 	<ul style="list-style-type: none"> Manager, Supervisor, Foreman and all workers shall adhere to all requirements outlined in the Permit to Work, Risk Assessment, Method Statement, Job Safety Procedure, and other relevant safety practices and standards 	3	3	9	<ul style="list-style-type: none"> The Site Manager, Supervising Engineer, a n d Foreman shall designate a Permit Receiver competent enough to take responsibility for securing the Permit to Work Permit Receiver shall be trained and authorized by the Manager to receive a Permit to Work Permit Receiver shall be responsible for overseeing the safety of all workers under his Permit to Work Manager, Supervisor, Foreman and all workers shall adhere to all requirements outlined in the Permit to Work, Risk Assessment, Method Statement, Job Safety Procedure, and other relevant safety practices and standards All workers shall attend the toolbox meeting daily conducted by the Supervising Engineer, Foreman, and Permit Receiver All workers attending the toolbox meeting shall sign on the attendance sheet attached to the specific Permit to Work 	3	1	3	Permit Receiver/Issuer/HSE 07-02-26	yes

		<ul style="list-style-type: none"> Inadequate coordination and area control protocol 	<ul style="list-style-type: none"> Environmental complaint 	<ul style="list-style-type: none"> The Site Manager, Supervising Engineer, and Foreman shall designate a Permit Receiver competent enough to take responsibility for securing the Permit to Work 	3	3	9	<ul style="list-style-type: none"> The Site Manager, Supervising Engineer, and Foreman shall designate a Permit Receiver competent enough to take responsibility for securing the Permit to Work Permit Receiver shall be trained and authorized by the Manager to receive a Permit to Work Permit Receiver shall be responsible for overseeing the safety of all workers under his Permit to Work Manager, Supervisor, Foreman and all workers shall adhere to all requirements outlined in the Permit to Work, Risk Assessment, Method Statement, Job Safety Procedure, and other relevant safety practices and standards All workers shall attend the toolbox meeting daily conducted by the Supervising Engineer, Foreman, and Permit Receiver All workers attending the toolbox meeting shall sign on the attendance sheet attached to the specific Permit to Work 	3	1	3	Permit Receiver/issuer/HSE 07-02-27	yes
2	Preparation and transportation of tools and materials to the working area	<ul style="list-style-type: none"> Poor housekeeping in the workplace 	<ul style="list-style-type: none"> Head, arm, body, and leg injuries due to slips, trips and falls 	<ul style="list-style-type: none"> Prepare SEC internal work permit and get approval from the SEC site management team include other attachments such as Method Statement, Job Safe Practice, and other docs as required by SEC Remove unwanted construction materials and dispose of site debris to clear the working area. 	3	2	6	<ul style="list-style-type: none"> Ensure the responsible person to comply the requirements Continues improvement of site condition and monitoring. Arrangement of construction materials, proper differentiation, and various signage to isolate the working area. 	3	1	3	Manager/HSE /Supervisor 07-02-28	yes
		<ul style="list-style-type: none"> Unskilled workers 	<ul style="list-style-type: none"> Physical Injury due to lack of safety awareness 	<ul style="list-style-type: none"> Ensure that all workers are given a HSE induction before deployment on-site. Conduct safety toolbox meeting and discussed the work procedures before the start of work. Ensure that all workers are provided with all the required Personal protective equipment for minimum and general requirements. 	3	2	6	<ul style="list-style-type: none"> Close supervision required; supervisor and supervisor must be present at the site. In-house training to be given to the new employees 	3	1	3	Manager/HSE /Supervisor 07-02-29	yes
		<ul style="list-style-type: none"> Incorrect manual handling/ lifting of material 	<ul style="list-style-type: none"> Muscular injuries (back pain, strain, fractures) Hand injuries 	<ul style="list-style-type: none"> Ensure correct body positioning and manual lifting procedures. Only 20 kg is allowed for lifting by an individual. Use buddy system if the load exceeds. Use hand protection (cotton gloves with rubber on the palm for good grip) when handling materials. Keep hands away from pinch/crash points 	3	2	6	<ul style="list-style-type: none"> Provide a hand truck/trolley for the transport of heavy and large materials Provide Manual handling Training to the workers. 	3	1	3	Manager/HSE /Supervisor 07-02-30	yes
		<ul style="list-style-type: none"> Poor Access/Egress 	<ul style="list-style-type: none"> Physical injury from slips, trips & falls 	<ul style="list-style-type: none"> Access pathways to be kept clear from any obstruction. Conduct housekeeping before, during, and after work to ensure free access/egress. 	3	2	6	<ul style="list-style-type: none"> Any obstructions shall be moved and kept materials away from any access. Keep the work area free from loose tools and materials. Provision of proper work access (i.e. ladder or scaffold) 	3	1	3	Manager/HSE /Supervisor 07-02-31	yes
		<ul style="list-style-type: none"> High ambient temperature 	<ul style="list-style-type: none"> Collapse, unconscious, heat stroke, fatigue, exhaustion 	<ul style="list-style-type: none"> Provide sufficient ventilation (AC, blower, fan etc.) Provide sufficient drinking water and scheduled breaks. Drinking containers shall be protected from direct exposure to sunlight. 	3	2	6	<ul style="list-style-type: none"> Conduct temperature/humidity monitoring to ensure safe working conditions. All personnel must undergo a Heat Stress Awareness Training. Display some heat stress campaigns at the site to increase the worker's awareness. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-32	yes

3	Fabrication of steel support at the workshops involves laying out, cutting, fitting, measuring, and welding metals to create the desired shape.	<ul style="list-style-type: none"> Exposure to excessive; <ul style="list-style-type: none"> Noise Dust Vibration Lighting Water & Moisture 	<ul style="list-style-type: none"> Excessive noise levels produced will cause hearing problems to workers. Airborne dust particles present in the workspace can trigger asthma in workers. Created severe or excess vibration that could be transferable to the personnel/workers Poor lighting will cause eye strain to workers. Surface water on the floor in the workspace and will cause serious physical injury due to slip. 	<ul style="list-style-type: none"> All workspaces have good lighting, which is maintained regularly. Fluorescent tubes are checked and replaced as required. All approved personal protective equipment (PPE) is used where required. All portable welding equipment is regularly maintained to help minimize the risk of exposure to these hazards. All portable welding equipment maintenance is documented 	3	4	12	<ul style="list-style-type: none"> Exposure to noisy workshop environments is monitored & evaluated regularly for all workers. Engineering controls (or physical changes) such as mandatory machinery guarding or protective safety screens and enclosures are in all workspaces and are in good working condition. Staff & workers training is provided to minimize exposure to these hazards. All ducted welding fume & dust extraction systems are fully maintained, cleaned & emptied, connected & operational. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-33	yes
		<ul style="list-style-type: none"> Electrical: Live Electrical Cable unsecured 	<ul style="list-style-type: none"> Types of injuries from electrical currents such as electrocution (fatal), electric shock, and burns. 	<ul style="list-style-type: none"> All portable electric welders have a wall-mounted isolation switch that disconnects all electrical power. Lock Out" or warning "Danger" tags are affixed to all electrical welding equipment under repair or maintenance, preventing workers from using the equipment All portable electrical welding equipment, its electrical switches, plugs, and power leads are visually checked. 	3	4	12	<ul style="list-style-type: none"> Electrical safety inspections, testing, tagging, etc., are completed regularly per the guidelines for all portable electrical welding equipment. Electrical maintenance on all portable power tools are documented. GFCI must be installed for protection against ground fault 	3	1	3	HSE /Site Engineer/Supervisor 07-02-34	yes
		<ul style="list-style-type: none"> Exposure to; <ul style="list-style-type: none"> Heat, Burns & Scalds Friction Radiation Hazardous Substances 	<ul style="list-style-type: none"> Exposed to heating elements, exposed flame, flashback, molten metals, or hot fluids likely to cause scalding or burning to workers. Hot weather conditions resulting in stress & low productivity of workers Workers come into contact with moving materials or machinery components, which can result in friction burns to the skin, particularly on hands. An electric arc generates UV and IR radiation, which can cause burning and discomfort to unprotected skin. Overexposure to UV radiation can also cause skin cancer. Exposure to hazardous or toxic chemicals such as oils, hydraulic fluids, greases, coolants, volatile vapors, or fumes. 	<ul style="list-style-type: none"> Employee/worker training is provided to minimize exposure to these hazards. Frequent water intake and more break time for workers to allow body temperature to cool down. All approved personal protective equipment (PPE) is used where required. Specifically, approved protective gloves are issued & worn in circumstances where plant operators' hands could be exposed to extreme heat, friction, abrasion, chemical burns, etc. Specifically, protective welding helmets & goggles, leather aprons, jackets, and work boots are worn by all workers when operating any welding plant & equipment Any hazardous waste materials or toxic dust & gases resulting from this welding process are monitored 	3	4	12	<ul style="list-style-type: none"> Machines likely to generate excessive heat or sparks are isolated, ventilated & monitored closely. All portable welding equipment maintenance is documented in a register. Welding bays are designed to allow for appropriate supervision. Welding curtains (or similar) are provided around all electrical welding bays to help prevent others from seeing an electric arc or "welder's flash." Portable welding equipment is regularly maintained to help minimize the risk of exposure to these hazards. MSDS of hazardous chemicals must be available at the site. All hazardous substances must be identified, and relevant Material Safety Data Sheets and PPE information provided to employees exposed to those substances 	3	1	3	HSE /Site Engineer/Supervisor 07-02-35	yes
		<ul style="list-style-type: none"> The sudden accidental release of stored energy triggered by volatile, explosive substances such as stored gases, vapors, or liquids will cause fire or explosion. 	<ul style="list-style-type: none"> Explosion & Fire: 	<ul style="list-style-type: none"> All ducted dust, fumes & vapor extraction systems are regularly maintained & cleaned Fire extinguishers of the correct type are readily available in all workspaces & positioned near exit doorways. 	3	4	12	<ul style="list-style-type: none"> Staff training is provided regarding procedures for the correct & appropriate use of fire safety equipment. Exits from buildings & other work areas are defined & access to them is clear of obstructions. Safety signage is posted denoting the location of all fire safety items & emergency exits 	3	1	3	HSE /Site Engineer/Supervisor 07-02-36	yes
	<ul style="list-style-type: none"> Awkward position due to sitting on the ground Repetitive motions such as leaning and reaching 	<ul style="list-style-type: none"> Back pain (muscular injury) 	<ul style="list-style-type: none"> Observed proper posture during the marking of holes Work rotation of workers Provide and use appropriate PPE (clear glass, hard hat, safety shoes, hand gloves, etc.) 	3	3	9	<ul style="list-style-type: none"> Close supervision required; supervisor and supervisor must be present at the site. In-house training to be given to the workers for the specific activity 	3	1	3	HSE /Site Engineer/Supervisor 07-02-37	yes	
	<ul style="list-style-type: none"> Scattered cables, tools & materials 	<ul style="list-style-type: none"> Slips, trips & falls on the same level may result to any physical injury 	<ul style="list-style-type: none"> Ensure that the area is free from any materials or obstruction before marking. Ensure that all temporary electrical cables. Cords/wirings are routed or hanged above grade to eliminate tripping hazards Practice 15 minutes of housekeeping before and after work 	3	3	9	<ul style="list-style-type: none"> Assign a special team to maintain the cleanliness of the work area Provide a waste bin near the work location 	3	1	3	HSE /Site Engineer/Supervisor 07-02-38	yes	

4	Marking and drilling of floors (holes for raised supports)	<ul style="list-style-type: none"> Improper usage of drill machine/Incompetent workers 	<ul style="list-style-type: none"> Severe physical injuries (hand, arm, electric shock) 	<ul style="list-style-type: none"> Only trained and competent personnel shall be assigned for the use of power tools. Site supervisor's presence during the execution of work All portable tools must be inspected before being use. 	3	3	9	<ul style="list-style-type: none"> Refresher training for the competent workers in handling power tools Regular inspection of tools and equipment to be carried out All defective tools must be brought to store for replacement. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-39	yes
		<ul style="list-style-type: none"> Dust particles exposure 	<ul style="list-style-type: none"> Respiratory diseases (i.e. Cough, asthma) 	<ul style="list-style-type: none"> LEV (local exhaust ventilation), blower, or industrial exhaust fans should be provided for indoor activity Dust control by moistening the location of holes to be drilled with water Appropriate dust masks to be worn by workers 	3	3	9	<ul style="list-style-type: none"> Training in proper usage of PPE Regular maintenance of LEV/blower/fans mobilizes on site. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-40	yes
		<ul style="list-style-type: none"> Excessive noise 	<ul style="list-style-type: none"> Tinnitus 	<ul style="list-style-type: none"> Conduct a noise survey to determine the ear plug/ear muff capacity to be provided Provision of suitable ear protection to the user. 	3	3	9	<ul style="list-style-type: none"> Refresher training for the competent workers in handling power tools Regular inspection of tools and equipment to be carried out Training in proper usage of PPE 	3	1	3	HSE /Site Engineer/Supervisor 07-02-41	yes
		<ul style="list-style-type: none"> Sparks from drill bit (may cause or start fire) 	<ul style="list-style-type: none"> Damaged to properties, severe injuries, fatality 	<ul style="list-style-type: none"> Adequate fire extinguishers and fire blanket should be provided in the working area. Use of lubricant/coolant when drilling to avoid burns, and damage to the equipment. Appropriate PPE to protect the user from sparks (face shield, cove all, apron) 	3	3	9	<ul style="list-style-type: none"> Regular maintenance of tools and equipment to be carried out Continuous housekeeping in the area to remove all combustible materials. Use a fire blanket to contain the flying sparks. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-42	yes
		<ul style="list-style-type: none"> Worker wearing loose clothing 	<ul style="list-style-type: none"> Entanglement resulting in hand or arm injury 	<ul style="list-style-type: none"> No loose clothing, and remove all jewelry To prevent being entangled on the rotating part of the tools. Handle must be fixed to the drill machine to achieve a stable and good grip. 	3	3	9	<ul style="list-style-type: none"> Provide Power Tools Training to the workers. Close supervision is required; the supervisor and foreman must always be present. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-43	yes
		<ul style="list-style-type: none"> Poorly maintained hand tools use (e.g. spanner, pliers, screwdrivers) 	<ul style="list-style-type: none"> Physical injuries (hand and arm), damaged of materials 	<ul style="list-style-type: none"> Keep all tools in good condition with regular maintenance Use the right tool for the job Examine each tool for damage before use and do not use damaged tools. Use tools according to the manufacturers instruction. 	4	3	12	<ul style="list-style-type: none"> Employees should be trained in the proper use of all tools 	4	1	4	HSE /Site Engineer/Supervisor 07-02-44	yes
		<ul style="list-style-type: none"> Workers not provided with the appropriate Personal Protective Equipment (i.e. cotton gloves) 	<ul style="list-style-type: none"> Hand Injury 	<ul style="list-style-type: none"> Provide and use properly the correct PPE (hand gloves with rubber on the palm for good grip) It is the supervisor's responsibility to ensure that all workers are trained and provided with and wear all the PPE provided to them. 	4	3	12	<ul style="list-style-type: none"> Training for the use and care of PPE to be given to all workers All defective tools must be brought to store for replacement. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-45	yes

Cutting, fixing, and installing of vertical raise supports, frames, and floor tiles.

<ul style="list-style-type: none"> Inexperience workers using hand tools 	<ul style="list-style-type: none"> Potential of making mistakes and may result to physical injuries 	<ul style="list-style-type: none"> Only trained and competent personnel shall be assigned for the use of hand tools. Site supervisors' presence during the execution of work Toolbox talks to be conducted by supervisor before starting the task. 	4	3	12	<ul style="list-style-type: none"> In-house training of newly hired workers based on their job 	4	1	4	HSE /Site Engineer/Supervisor 07-02-46	yes
<ul style="list-style-type: none"> Poor lighting 	<ul style="list-style-type: none"> Physical injury due to trips and slips 	<ul style="list-style-type: none"> Provide additional illumination in the identified work location where poor lighting was observed Conduct a lighting survey after installation/repair to ensure that the lighting provided is suitable 	4	3	12	<ul style="list-style-type: none"> On-call electrical maintenance in the work project Regular inspection of installed lighting in the project 	4	1	4	HSE /Site Engineer/Supervisor 07-02-47	yes
<ul style="list-style-type: none"> Poor arrangement of connection on live-electricity 	<ul style="list-style-type: none"> Electric shock, electrocution 	<ul style="list-style-type: none"> Conduct Lockouts/tag outs to ensure that electricity is off and residual; it also secures unauthorized personnel to prevent working. Proper and safe connections shall be made by trained electricians. Electrician shall use cotton gloves with rubber palm hand gloves. 	4	3	12	<ul style="list-style-type: none"> Switching off the power supply will be compulsory before leaving the power tool idle for longer durations or leaving the working locations. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-48	yes
<ul style="list-style-type: none"> Improper plug/socket use. Extension cables have many joints, and the power supply source is not properly grounded. 	<ul style="list-style-type: none"> Electric shock, electrocution, fire 	<ul style="list-style-type: none"> Only specified/recommended industrial socket / Plugs will be used for extension wires. All electrical tools and equipment must be maintained in safe condition and checked regularly for defects. If a severe defect is found, it must be removed from service. Power tools must be double insulated otherwise it should be earthed properly. 	4	3	12	<ul style="list-style-type: none"> Grounding /Earthing to be provided on diesel generators and temporary distribution boards or panel. Defective tools and equipment shall not be used and must be surrender to store for replacement. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-49	yes
<ul style="list-style-type: none"> Scattered electrical cables on the floor 	<ul style="list-style-type: none"> Tripping hazards that can cause physical injuries 	<ul style="list-style-type: none"> Ensure that all temporary electrical cables, cords/wirings are routed or hanged above grade to eliminate tripping hazards 	4	3	12	<ul style="list-style-type: none"> Maintain good housekeeping inside the work location 	4	1	4	HSE /Site Engineer/Supervisor 07-02-50	yes
<ul style="list-style-type: none"> Sharp objects 	<ul style="list-style-type: none"> Hand injuries due to contacts with sharp tools and object 	<ul style="list-style-type: none"> All workers engage in task must be provided with required personal protective equipment at all times. Hand protection (min. cotton gloves) is a must while handling protruding wires or sharp objects. 	4	3	12	<ul style="list-style-type: none"> Supervisor / foreman to ensure proper monitoring of their activities for safe operation. Hand protection safety awareness training and campaign posters. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-51	yes
<ul style="list-style-type: none"> Unsafe hot works(cutting & grinding) 	<ul style="list-style-type: none"> Fire & explosion 	<ul style="list-style-type: none"> Provision of adequate Fire extinguisher Remove of combustible/Flammable materials in the working area. Wear the required personal protective equipment 100% eye and face protection Ensure all portable grinding and cutting machines is equipped with mechanical protective guard. All portable tools must be inspected prior to use. Ensure proper ventilation (i.e. air blower) is provided. Use ear protection (i.e. ear plug or ear muff) 	4	3	12	<ul style="list-style-type: none"> Standby firewatcher to monitor hot work activity. Use fire blanket to contain the flying sparks. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-52	yes
<ul style="list-style-type: none"> Use of electrical tools with Rotating/moving parts (Entanglement/ Trapping Point) 	<ul style="list-style-type: none"> Physical injury due to contacts from rotating parts Accidental breakage of grinding disc striking personnel resulting serious injury 	<ul style="list-style-type: none"> Ensure all tools are inspected and color coded. Ensure all portable grinding and cutting machines is equipped with mechanical protective guard. All portable tools must be inspected prior to use. Ensure disc is match or over on the capacity rating of the grinder. No loose clothing and remove all jewelry to prevent being entangled on the rotating part of the tools. All hand tools to be clean and in good working order and checked daily. 	4	3	12	<ul style="list-style-type: none"> Ensure that the PPE is in good condition and affords adequate protection. Provide Power Tools Training to the workers. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-53	yes
<ul style="list-style-type: none"> Dust particles exposure 	<ul style="list-style-type: none"> Respiratory diseases 	<ul style="list-style-type: none"> LEV (local exhaust ventilation), blower or industrial exhaust fans should be provided for indoor activity Dust control by moistening the location of holes to be drilled with water Appropriate dust mask to be worn by workers 	4	3	12	<ul style="list-style-type: none"> Training in proper usage of PPE Regular maintenance of LEV/blower/fans mobilizes on site. 	4	1	4	HSE /Site Engineer/Supervisor 07-02-54	yes

		<ul style="list-style-type: none"> Excessive noise 	<ul style="list-style-type: none"> Tinnitus or hearing loss 	<ul style="list-style-type: none"> Conduct a noise survey to determine the ear plug/ear muff capacity to be provided Provision of suitable ear protection to the user. 	4	3	12	<ul style="list-style-type: none"> Refresher training for the competent workers in handling power tools Regular inspection of tools and equipment to be carried out Training in proper usage of PPE 	4	1	4	HSE /Site Engineer/Supervisor 07-02-55	yes
		<ul style="list-style-type: none"> High ambient temperature 	<ul style="list-style-type: none"> Heat stress, exhaustion 	<ul style="list-style-type: none"> Provide sufficient drinking water and scheduled breaks. Monitoring of heat index value and provision of rest shelter area if working outside the building, 	4	3	12	<ul style="list-style-type: none"> Heat stress training to be given to all the workers 	4	1	4	HSE /Site Engineer/Supervisor 07-02-56	yes
6	Clearing the area (floor)	<ul style="list-style-type: none"> Waste accumulation can cause tripping to the workers 	<ul style="list-style-type: none"> Physical injuries due to falls from the same level 	<ul style="list-style-type: none"> Remove all materials, tools, and generated waste after the work is done. Dispose of generated waste into the designated waste bins. Wear appropriate PPE (Clear glass, dust mask, Cotton gloves, cover-all, helmet and safety shoes) when conducting housekeeping 	3	3	9	<ul style="list-style-type: none"> Provision of waste bins near the area to maintain excellent housekeeping. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-57	yes
7	Installing the raised floor tiles/panels	<ul style="list-style-type: none"> Incorrect manual handling/ lifting of tiles/panels (forceful movement, incorrect posture) 	<ul style="list-style-type: none"> Muscular I injuries (back pain, strain, fracture) 	<ul style="list-style-type: none"> Ensure correct body positioning and manual lifting procedures. Only 20 kg is allowed for lifting by an individual. Use buddy system if the load exceeds. Use hand protection (cotton gloves with rubber palm for good grip) during handling of materials. Site supervisor's presence during the execution of work 	3	3	9	<ul style="list-style-type: none"> Provide Manual handling Training to the workers (Workers shall be aware of proper methods of lifting and moving heavy or awkward loads) 	3	1	3	HSE /Site Engineer/Supervisor 07-02-58	yes
		<ul style="list-style-type: none"> Sharp objects (metal frames/tiles edges) 	<ul style="list-style-type: none"> Hand injuries (i.e. cuts) 	<ul style="list-style-type: none"> Keep hands away from pinch/crash points Supervisor/foreman to ensure all sharp objects & materials are removed and placed in a safe area. Suitable PPE to be provided and used to avoid any injury. (Cotton gloves with rubber palms when handling sharp objects) 	3	3	9	<ul style="list-style-type: none"> Specific safety awareness training for hand protection for all the workers engaged in the activity Safety posters and signage to be displayed for hand protection 	3	1	3	HSE /Site Engineer/Supervisor 07-02-59	yes
8	Housekeeping and removal of excess panels/tiles on the raised floor, clearing the area	<ul style="list-style-type: none"> Excess materials (tiles) and scattered tools and cable connections 	<ul style="list-style-type: none"> Physical injury due to slips, trips, and falls 	<ul style="list-style-type: none"> Use a hand truck or trolley to return excess materials to store Wear suitable PPE when conducting housekeeping (cotton gloves, dust mask, hard hat, safety shoes) Dispose of generated waste into the designated waste bins. 	3	2	6	<ul style="list-style-type: none"> Ensure that all hand tools & portable electrical equipment were properly stored after usage (kept inside the toolboxes or returned to the store Provision of waste bins near the area to maintain excellent housekeeping. 	3	1	3	HSE /Site Engineer/Supervisor 07-02-60	yes
		<ul style="list-style-type: none"> Poor housekeeping 	<ul style="list-style-type: none"> Significant property and appurtenances damage Governmental violation Environmental complaint Loss of production Accident resulting in severe injury or death to worker Significant cost due to damages 	<ul style="list-style-type: none"> Permit Receiver shall ensure that housekeeping in done before, during, and after the work All waste materials generated from the work shall be disposed of properly and shall not be left unattended at the worksite Mobile equipment shall be properly parked on a designated equipment laydown All materials used at the site, such as chemicals flammable and combustible materials, shall be stored at the designated storage at the end of each day Electrical equipment shall be adequately secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> Permit Receiver shall account for all workers under his Permit to Work and ensure all have signed out on the attendance sheet and clear the area Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location The Site Manager shall be responsible for the effective implementation of the Permit to Work Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/Issuer /Supervisor 07-02-61	yes

C l o s i n g of Permit to Work

<ul style="list-style-type: none"> Undisposed waste materials 	<ul style="list-style-type: none"> Significant property and appurtenances damage Governmental violation Environmental complaint Loss of production Accident resulting serious injury or death to worker Significant cost due to damages 	<ul style="list-style-type: none"> Permit Receiver shall ensure that housekeeping in done before, during and after the work All waste materials generated from the work shall be disposed properly and shall not be left unattended at the worksite Mobile equipment shall properly parked on a designated equipment laydown All materials used at the site such as chemicals, flammable and combustible materials shall be stored at the designated storage at the end of each day Electrical equipment shall be properly secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> Permit Receiver shall account all worker under his Permit to Work and ensure all have signed out on the attendance sheet and clear of the area Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location Site Manager shall be responsible on the effective implementation of the Permit to Work Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-62	yes
<ul style="list-style-type: none"> Unaccounted workers 	<ul style="list-style-type: none"> Governmental violation Loss of production Accident resulting serious injury or death to worker 	<ul style="list-style-type: none"> Permit Receiver shall ensure that housekeeping in done before, during and after the work All waste materials generated from the work shall be disposed properly and shall not be left unattended at the worksite Mobile equipment shall properly parked on a designated equipment laydown All materials used at the site such as chemicals, flammable and combustible materials shall be stored at the designated storage at the end of each day Electrical equipment shall be properly secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> Permit Receiver shall account all worker under his Permit to Work and ensure all have signed out on the attendance sheet and clear of the area Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location Site Manager shall be responsible on the effective implementation of the Permit to Work Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-63	yes
<ul style="list-style-type: none"> Inadequate communication 	<ul style="list-style-type: none"> Significant property and appurtenances damage Governmental violation Loss of production Accident resulting serious injury or death to worker Significant cost due to damages 	<ul style="list-style-type: none"> Permit Receiver shall ensure that housekeeping in done before, during and after the work All waste materials generated from the work shall be disposed properly and shall not be left unattended at the worksite Mobile equipment shall properly be parked on a designated equipment laydown All materials used at the site such as chemicals, flammable and combustible materials shall be stored at the designated storage at the end of each day Electrical equipment shall be properly secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> Permit Receiver shall account all worker under his Permit to Work and ensure all have signed out on the attendance sheet and clear of the area Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location Site Manager shall be responsible on the effective implementation of the Permit to Work Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-64	yes
<ul style="list-style-type: none"> Poor storage of chemical, flammable and combustible materials etc. 	<ul style="list-style-type: none"> Significant property and appurtenances damage Governmental violation Environmental complaint Loss of production Accident resulting in serious injury or death to worker Significant cost due to damages 	<ul style="list-style-type: none"> Permit Receiver shall ensure that housekeeping in done before, during, and after the work All waste materials generated from the work shall be disposed of properly and shall not be left unattended at the worksite Mobile equipment shall properly be parked on a designated equipment laydown All materials used at the site such as chemicals, a n d flammable and combustible materials shall be stored at the designated storage at the end of each day Electrical equipment shall be properly secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> Permit Receiver shall account for all workers under his Permit to Work and ensure all have signed out on the attendance sheet and clear of the area Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location The Site Manager shall be responsible for the effective implementation of the Permit to Work Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-65	yes

	<ul style="list-style-type: none"> • Unattended unsafe condition 	<ul style="list-style-type: none"> • Significant property and appurtenances damage • Governmental violation • Environmental complaint • Loss of production • Accident resulting in severe injury or death to worker • Significant cost due to damages 	<ul style="list-style-type: none"> • Permit Receiver shall ensure that housekeeping in done before, during, and after the work • All waste materials generated from the work shall be disposed of properly and shall not be left unattended at the worksite • Mobile equipment shall be properly parked on a designated equipment laydown • All materials used at the site, such as chemicals and flammable and combustible materials, shall be stored at the designated storage at the end of each day • Electrical equipment shall be adequately secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> • Permit Receiver shall account for all workers under his Permit to Work and ensure all have signed out on the attendance sheet and clear the area • Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location • The Site Manager shall be responsible for the effective implementation of the Permit to Work • Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-66	yes
	<ul style="list-style-type: none"> • Unsecured electrical equipment, energized equipment 	<ul style="list-style-type: none"> • Significant property and appurtenances damage • Governmental violation • Environmental complaint • Loss of production • Accident resulting in severe injury or death to worker • Significant cost due to damages 	<ul style="list-style-type: none"> • Permit Receiver shall ensure that housekeeping in done before, during, and after the work • All waste materials generated from the work shall be disposed of properly and shall not be left unattended at the worksite • Mobile equipment shall be properly parked on a designated equipment laydown • All materials used at the site, such as chemicals and flammable and combustible materials, shall be stored at the designated storage at the end of each day • Electrical equipment shall be adequately secured, distribution board closed and padlocked 	3	2	6	<ul style="list-style-type: none"> • Permit Receiver shall account for all workers under his Permit to Work and ensure all have signed out on the attendance sheet and clear of the area • Supervising Engineer and Foreman shall adhere to the proper housekeeping and storage of materials at the designated location • The Site Manager shall be responsible for the effective implementation of the Permit to Work • Permit Issuer shall visit the work location to verify good housekeeping was conducted before closing the Permit to Work 	3	1	3	HSE /Permit receiver/issuer /Supervisor 07-02-67	yes