



		ALL ACTIVITIES				DOC NO:	RCC-HSE-RA-00	DEPARTMENT	RCC - HSE					
DOC NAME		HSE RISK REGISTER				PREPARED DATE:	MAR. 2026	REVISION NO:	02					
SI No.	Activity and Location	Hazard and/or occurring of risk	Consequence of hazard	Who Effected	Initial Risk Rating				Control Measure(s) to be implemented	Residual Risk				Reference (Standards, Procedure, CoP, etc.)
					Probability	Severity	Risk Rating	Risk Level		Probability	Severity	Risk Rating	Risk Level	
1	<b>Mobilization of Workforce, Equipment &amp; Materials to the site</b>	<ul style="list-style-type: none"> <li>❖ Transport arrangements for the deployment of workers</li> <li>❖ Mobilization of concrete transit mixer</li> <li>❖ Mobilization of miscellaneous construction material (Formwork items, Steel etc.)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Moving vehicles / live traffic</li> <li>➤ Equipment failure</li> <li>➤ Collision with other vehicles, pedestrians, and other fixed objects</li> <li>➤ Unfamiliarity to the site</li> <li>➤ Unauthorized parking</li> <li>➤ Fall of load.</li> </ul>	<ul style="list-style-type: none"> <li>• Site workers</li> <li>• Site staff</li> <li>• Site visitors</li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. All the required PTW and NOCs to be obtained from the concerned before mobilizing any material to site</li> <li>2. Only trained, authorized and holder of valid driver's license shall drive any site vehicle</li> <li>3. Driver to undergo regular awareness training on defensive driving techniques.</li> <li>4. Site speed limit and site traffic rules shall always be observed</li> <li>5. Driver shall not use mobile phones nor head set while driving</li> <li>6. Driver should not be under the influence of any medication or alcohol that may result into drowsy reaction while driving</li> <li>7. Pedestrian movements to be taken care of while onsite driving</li> <li>8. Vehicle doors should be securely closed during transit</li> <li>9. Bus boarding only in a designated area inside the site. Under any circumstances never allow to board or drop passenger along the road.</li> <li>10. Boarding of buses only as per sitting capacity</li> </ol>	1	3	3	L	ADOSH SF CoP <b>44.0 Traffic Management &amp; Logistics</b> ADOSH-SF CoP 14.0 – <b>Manual Handling and Ergonomics,</b> ADOSH SF- CoP 2.0 – <b>Personal Protective Equipment</b>

									<ul style="list-style-type: none"> <li>11. Vehicles to be parked in designated area only</li> <li>12. Driver should ensure that the vehicle is not left unattended with keys in it</li> <li>13. All personnel to undergo site HSE induction before accessing the site for the first time and should be made aware of emergency procedures and emergency contact numbers at site</li> <li>14. All personnel should always wear the site mandatory PPE.</li> </ul>					
2	<b>Transportation of workers to &amp; from labour accommodation</b>	<ul style="list-style-type: none"> <li>❖ Vehicle collision with other road users &amp; pedestrians</li> <li>❖ Overloading</li> <li>❖ Vehicle failure</li> <li>❖ Human failure</li> <li>❖ Adverse weather condition</li> <li>❖ Fall from vehicle while on transit</li> <li>❖ Fire</li> </ul>	➤ Serious personal injury	<ul style="list-style-type: none"> <li>• Site Workers</li> </ul>	3	4	12	H	<ul style="list-style-type: none"> <li>1. Only adequately trained and authorized driver to operate the bus where he must be aware of site &amp; road traffic requirements. Holder of valid driver's license with the corresponding category to drive the vehicle.</li> <li>2. Driver to undergo regular awareness training on defensive driving techniques. New drivers must undergo familiarization training with trained driver to ensure adherence to traffic requirements including direction of travel to &amp; from accommodation.</li> <li>3. Observed speed limit, designated vehicle lane, safe distance with other vehicle, passing/overtaking rules, and vehicle route to and from labour accommodation.</li> <li>4. Bus boarding only in a designated area inside the site. Under any circumstances never allow to board or drop passenger along the road.</li> <li>5. During bus boarding, vehicle must be securely parked and ensure parking brake engaged.</li> <li>6. Bus boarding must be adequately controlled with the presence of security or watchman and traffic</li> </ul>	1	4	4	M	ADOSH SF CoP <b>44.0 Traffic Management &amp; Logistics</b>

									marshal. 7. Onsite driving must be observed pedestrian movements. 8. Door must be securely close during transit. 9. Driver must be physically fit and as necessary must undergo regular health screening at site clinic. 10. Driver should not intake any medication or alcohol when driving that may resulted to drowsy reaction. 11. Boarding of buses only as per sitting capacity. Never use buses to load extra materials. 12. Driver shall not use mobile phones nor head set while driving					
3	<b>Vehicle movement at site( Material delivery, concrete Pump etc)</b>	❖ Material falling, hitting with workers, substances or structures, Unsafe unloading Equipment's, Poor supervision	Slips, Trips & Falls. Heavy equipment failure. Injuries/death to personnel, Back pain / Body pain, Property damages/equipment, Falling materials, Pinch points Back pain	Who involved the Task / Activity	3	4	12	H	1. Isolated the area for soil unloading activity. 2. Provide designed path/lane. 3. Toolbox talk should be given to workers before commencement of job. 4. Only Allow authorized operators & drivers, 5. Operator and flagman are should be third party certified. 6. All equipment shall be equipped with reverse alarm. 7. Flagman (wearing highly visible clothing) should assist to the vehicle operator. 8. Competent flagman should be present. 9. Place adequate safety signages all over the work area including vehicle movement area. 10. Truck should be stopped completely before commencing unloading.	1	4	4	M	ADOSH SF-CoP 44.0 –Traffic Management and Logistics , CoP 36.0 - Plant and Equipment

									11. Competent supervisor/foreman should monitor the activity				
4	Site Survey Work	<ul style="list-style-type: none"> <li>❖ Uneven surface causing slip, trip</li> <li>❖ Biological hazard (Insects, scorpion, snakes)</li> <li>❖ Underground existing utilities.</li> <li>❖ Protruding objects (Shrubs, steels etc.)</li> <li>❖ Unauthorizes operation (interaction with existing services without permission from concerned parties)</li> <li>❖ Keeping surveying instruments unattended</li> </ul>	<ul style="list-style-type: none"> <li>➤ Minor injury (hand injuries, sprain, strain)</li> <li>➤ Skin irritation</li> <li>➤ Allergies</li> <li>➤ Damage to underground services.</li> <li>➤ Theft or damage of survey instruments</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. NOC, internal and external permit to work to be obtained before starting the work.</li> <li>2. All the workers must attend site safety induction.</li> <li>3. As build drawings of the area to be studied before starting of work.</li> <li>4. Survey points to be marked with wooden pegs where there is a chance of existing services.</li> <li>5. Survey control points must be established away from road to avoid hazards associated with moving vehicles.</li> <li>6. Survey instruments shall not be left unattended.</li> <li>7. Existing services to be marked and caution signage to be posted.</li> <li>8. Utilization of proper hand- tools as home-made tools are not allowed. Ensure the correct tools are selected for the relevant task to be carried out.</li> <li>9. Ensure hand tools are stored in the correct manner and kept clean to prevent slipping or loss of grip.</li> <li>10. Ensure all tools and equipment are checked before use and returned after use to prevent loss or damage.</li> <li>11. Ensure any defected equipment is returned, taken out of use &amp; reported to your supervisor.</li> <li>12. Ensure that hammer shafts are in good condition and are free from splits, do not put tape around the shafts of hammers as this will hide any damaged.</li> <li>13. Survey instruments must have</li> </ol>	1	3	3	L

									valid calibration.					
5	<p><b>Use of construction equipment</b></p> <p><b>Earthwork (Cutting, Backfilling, Grading, Compaction, Grubbing, Levelling, Sub-Base / Gatch work etc.)</b></p>	<ul style="list-style-type: none"> <li>❖ Incompetent operator</li> <li>❖ Equipment failure.</li> <li>❖ Not maintaining safe distance from equipment</li> <li>❖ Unauthorized operation of equipment</li> <li>❖ Overtilting of equipment</li> <li>❖ Miss use of equipment</li> <li>❖ Using of equipment beyond its capacity.</li> <li>❖ Entanglement</li> </ul>	<ul style="list-style-type: none"> <li>➤ Major Injuries</li> <li>➤ Damage to underground services</li> <li>➤ Service Interruption</li> <li>➤ Fire</li> <li>➤ Fines and penalties</li> <li>➤ Work stoppage</li> <li>➤ Soil and air pollution</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ol style="list-style-type: none"> <li>1. Selection of equipment to be done after careful assessment of activity and site condition by site engineer.</li> <li>2. Plant &amp; equipment to be maintained properly.</li> <li>3. All the equipment must have valid registration and third-party inspection.</li> <li>4. Operators must have valid license and third-party training certificate.</li> <li>5. All equipment must have fire extinguisher.</li> <li>6. All equipment must have reverse alarm and beacon light.</li> <li>7. All equipment to be checked on daily basis and record of inspection to be maintained in shape of daily checklist.</li> <li>8. No makeshift arrangements will be allowed to be made in the equipment.</li> <li>9. (Tinting of operator cabin, fixing curtain / cardboard or anything that might obstruct vision, alteration in levers/knobs etc.)</li> <li>10. No one will be allowed to sit inside the operator cabin except the authorized operator.</li> <li>11. Operators will not be allowed to keep the equipment unattended.</li> <li>12. Equipment shall be parked in designated parking area.</li> <li>13. Third party certified flagman to be available with each equipment.</li> <li>14. Underground services to be located and marked before mobilizing equipment in the activity area.</li> <li>15. Trial pits to be made to confirm the depth and of existing services.</li> </ol>	1	4	4	M	ADOSH SF-CoP 44.0 –Traffic Management and Logistics , CoP 36.0 - Plant and Equipment

									16. Separate pedestrian access to be provided. 17. Spill kit to be provided in site to deal with any oil spillage. 18. Close supervision to be ensured. 19. Daily toolbox talk to be conducted. 20. Internal trainings must be given to the workers. 21. Sit mandatory PPE's to be provided to all personnel involved in the activities					
6	<b>Manual Excavation / Trial Pits</b>	<ul style="list-style-type: none"> <li>❖ Cave In</li> <li>❖ Underground existing utilities</li> <li>❖ Manual handling</li> <li>❖ Pinch points</li> <li>❖ Manual Handling</li> <li>❖ Incompetent workers</li> <li>❖ Damaged tools</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personal Injuries</li> <li>➤ Damage to existing services</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. Cable detector to be used to scan the existing cables before excavation.</li> <li>2. Pre task briefing shall be conducted on daily basis.</li> <li>3. Close supervision to be ensured.</li> <li>4. Exposed existing services (Cables, Pipes etc.) must be protected after exposing.</li> <li>5. Excavations must be barricaded and caution signages must be posted.</li> <li>6. In low visibility area warning / flashing lights must be installed.</li> <li>7. ☑ Construction team must priorities the backfilling and reinstatement of trial pits after required date to protect the exposed services.</li> <li>8. Proper access to be provided.</li> <li>9. (Steps, ramps, or other safe means of egress for workers working in trench excavations 4 feet (1.22 meters) or deeper, the means of egress must be located so as not to require workers to travel more than 25 feet (7.62 meters) laterally within the trench)</li> <li>10. Excavated material must be kept away from the edge of trial pits.</li> <li>11. Slopping, shoring, or benching to be provided to avoid cave in.</li> <li>12. Job rotation must be practiced to</li> </ol>	1	3	3	L	ADOSH SF CoP 29.0 <b>Excavation Works</b>

									minimizing the consequences of manual handling. 13. Welfare facilities rest area, drinking water station must be provided for site workers. 14. Lone working will not be allowed. 15. Site mandatory PPE must be used by all operatives					
7	<b>Mechanical Excavation</b>	<ul style="list-style-type: none"> <li>❖ Cave In</li> <li>❖ Underground Utilities</li> <li>❖ Collapse of excavation</li> <li>❖ Flooding of excavation</li> <li>❖ Fall of objects/persons into the excavation</li> <li>❖ Contact with live services</li> <li>❖ Overtitling of equipment</li> <li>❖ Ground water</li> <li>❖ Unauthorized access</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personnel Injury</li> <li>➤ Property Damage</li> <li>➤ Equipment damage</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ol style="list-style-type: none"> <li>1. Entrance in site must be controlled to prevent intruders / unauthorized access.</li> <li>2. Follow approved Method statements &amp; Drawings.</li> <li>3. Area shall be scanned to identify underground utilities.</li> <li>4. Refer to as built drawings to identify existing utilities.</li> <li>5. Excavation shall be benched, sloped, or protected as per competent person recommendations.</li> <li>6. Trial Pits shall be made to identify underground utilities</li> <li>7. Excavated soil shall be kept Minimum 1m away from the edge of excavation.</li> <li>8. Excavation edges shall be protected with hard barriers.</li> <li>9. Caution signages must be posted along excavation.</li> <li>10. In low visibility area warning / flashing lights must be installed</li> <li>11. Protect exposed Underground utilities.</li> <li>12. Maintain safe distance from live overheads.</li> <li>13. Flashing beacon shall be placed (where excavation is close to roads)</li> <li>14. Warning &amp; Warning signs shall be displayed</li> <li>15. Competent Operator shall be used</li> <li>16. Third party trained flagman shall be used.</li> </ol>	1	4	4	M	ADOSH SF CoP 29.0 Excavation Works

									17. Exclusion zone shall be established and barricaded. 18. Excavator shall have valid third-party inspection certificate. 19. Site mandatory PPE to be used by all site operatives					
8	<b>Installation of hoarding / fence</b>  Demarcation of site premises Barricading the premises with fence	<ul style="list-style-type: none"> <li>❖ Manual handling</li> <li>❖ Sharp edges</li> <li>❖ Pinch points</li> <li>❖ Slip trip fall due to uneven ground</li> <li>❖ Adverse weather condition (heavy wind)</li> <li>❖ Biological hazards</li> <li>❖ (Insects, snakes etc.)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Hand injuries</li> <li>➤ Musculoskeletal injuries due to manual handling of hording precast blocks.</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. Pre task briefing shall be conducted before starting of work.</li> <li>2. Sufficient workforce to be deployed for manual activity.</li> <li>3. Precast concrete foundations for hoarding to be offloaded near the activity area.</li> <li>4. To avoid manual handling mechanical means (pallet truck, skid steer, backhoe, crane etc.) to be used.</li> <li>5. During heavy wind condition installation of hoarding sheets shall be stopped.</li> <li>6. Standard design and method with correct accessories shall be used to install hoarding.</li> <li>7. Temporary material storage area shall be established.</li> <li>8. Proper staking of hoarding sheets to be ensured.</li> <li>9. To protect the hoarding sheets from heavy wind some load to be placed over sheets.</li> <li>10. Site mandatory PPE to be used by all operatives.</li> </ol>	1	3	3	L	ADOSH SF-CoP 44.0 –Traffic Management and Logistics. ADOSH-SF CoP 14.0 – Manual Handling and Ergonomics, ADOSH SF- CoP 2.0 – Personal Protective Equipment
9	<b>Ergonomics'/Manual Handling</b>	<ul style="list-style-type: none"> <li>❖ Strain of certain body parts due to improper handling and a high risk of developing musculoskeletal disorders or back injuries.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Back ache due to handling material with wrong posture.</li> <li>➤ Property damage due to falling material while handling.</li> <li>➤ Personnel injury can occur due to</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. Manual handling is part of orientation and yearly mandatory training for all contractors.</li> <li>2. Competent personals performing the task.</li> <li>3. Team lifting heavy loads</li> <li>4. Package size must be reduced, lifting aid used.</li> <li>5. Ensure that the task does not exceed the handler's capabilities.</li> <li>6. Ensure that the route to be taken</li> </ol>	1	3	3	L	ADOSH-SF CoP 14.0 – Manual Handling and Ergonomics

			<ul style="list-style-type: none"> <li>➤ falling material on operatives.</li> <li>➤ Personnel injury due to handling sharp objects.</li> </ul>							<ul style="list-style-type: none"> <li>7. while lifting is clear of any obstruction.</li> <li>7. Supervisor must make sure while manual handling loads individual task and environment to be considered to reduce the risk of manual handling.</li> <li>8. Tool Box talk prior to the work starts.</li> <li>9. Proper personal protective equipment provided.</li> <li>10. Wearing safety shoes/boots with toe protection.</li> </ul>					
10	<b>Use of mobile crane</b>	<ul style="list-style-type: none"> <li>❖ Overturning due to overloading</li> <li>❖ Unsuitable ground</li> <li>❖ -lack of support or operator error</li> <li>❖ Fall of load due to failure of lifting gear</li> <li>❖ Contact with overhead obstructions</li> <li>❖ Fall of person from the delivery truck</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> <li>➤ Trapping injuries / Impact Injuries.</li> </ul>	<ul style="list-style-type: none"> <li>• Site workers</li> <li>• Site staff</li> <li>• Site visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Capacity and type of crane determined in advance by site management in conjunction with the Lifting Crane Coordinator</li> <li>2. Mobile Crane and its lifting tools &amp; tackles must have a valid third-party certificate issued by approved third party agency.</li> <li>3. Specific lifting plan and permit approved by OME authorized person must be available on site prior to start the activity.</li> <li>4. All work to be completed under the guidance and control of the Crane Operation Coordinator.</li> <li>5. Ensure that auxiliary safety devices are in place and in good order</li> <li>6. Load charts MUST be in cab of crane</li> <li>7. Loads must not be suspended by the crane if unattended.</li> <li>8. Crane must be immobilized when left unattended.</li> <li>9. Lifting gears, tools and tackles to be inspected daily or before each rigging by rigger for any damage like cracks, cuts, bends or abrasions.</li> </ol>	1	4	4	M	ADOSH SF CoP 34.0 Safe Use of Lifting Equipment & Lifting Accessories	

								<p>10. Any damaged lifting gears must be taken out of service and returned to stores for quarantine. Any damaged lifting gears shall be repaired and re-inspected prior to put back into service.</p> <p>11. Crane drivers must be a minimum of 18 years of age and have third party certification Crane mats to be used in unstable ground.</p> <p>12. Do not positioned near the leading edge on top of rebar materials while hooking prior to lift.</p> <p>13. Ensure no person nearby the materials to be lifted before lifting</p> <p>14. Ensure no person is below the suspended load including riggers &amp; banksman.</p> <p>15. Provide proper access ladder when accessing the top of delivery truck during unloading materials.</p> <p>16. Ensure all illumination lights appropriate working throughout the vicinity of lifting activities.</p> <p>17. Riggers shall constantly communicate with the operator, restrict any movements in poor illuminated areas.</p> <p>18. In case of illumination failure, notify immediately on duty electrician.</p> <p>19. Competent supervision shall take in place.</p> <p>20. Riggers will be identifiable with red colour Hi-Viz jacket.</p> <p>21. Lifting supervisor/appointed person shall advise immediately</p>				
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									crane operators & riggers to temporary ceased lifting operation.					
									22. Restrict unnecessary movements of people adjacent to the activity. Whistle shall be provided to alert people.					
									23. Tool box talks prior to the task.					
11	<b>Use of Telehandler</b>	<ul style="list-style-type: none"> <li>❖ Overturning / topple down of the equipment due to:</li> <li>❖ Failure to use outrigger</li> <li>❖ Ramp/gradient surface</li> <li>❖ Positioning in unstable surface</li> <li>❖ Overloading</li> <li>❖ Failure of the machine</li> <li>❖ Operator Error</li> </ul>	➤ Serious personnel injuries.	<ul style="list-style-type: none"> <li>▪ Site Workers</li> <li>▪ Site Staff</li> <li>▪ Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. The driver must ensure that the machine is in a stable position, on firm and level ground surface.</li> <li>2. Adequate compaction when positioned on ground surface. Check the area especially when raising the load.</li> <li>3. Ensure the use of stabilizer / outrigger – must be rested in a firm level surface.</li> <li>4. Ensure stabilizer hydraulic system must be free of any leakage to adequately resist loading force.</li> <li>5. Kept away nearby trenches/excavation edges, ramp and steep surface.</li> <li>6. Ensure machine must be fitted with levelling indicator and Indicator lamp for stabilizers.</li> <li>7. Avoid overloading especially when raising load causing equipment unstable– only as per safe working load referring to boom length capacity. Load charts to be in all cab.</li> <li>8. Only competent, authorized &amp; adequately trained operator that aware on operating principles, controls of the machine and site conditions.</li> </ol>	1	4	4	M	<p>ADOSH SF CoP 34.0 Safe Use of Lifting Equipment &amp; Lifting Accessories.</p> <p>ADOSH SF CoP 51.0 <b>Powered Lift Trucks</b></p>

								<p>9. Operator must be adequate fit, undergo health screening prior to use the machine e.g. BP, eyesight test, with appropriate mobility and hearing condition.</p> <p>10. Restrict machine from unauthorized used by means of securing the machine e.g. do not leave the machine unattended, de-energized when not in use, key must remove from ignition switch and cab must be locked.</p> <p>11. Ensure safe traffic routes free from any obstructions and unlevelled surfaces.</p> <p>12. Ensure machine must be thoroughly inspected by 3rd party and pre-use check by the operator to ensure safe operation. Any found defects must be reported by the supervisor.</p> <p>13. Load to be correctly located on the forks, secures against slipping and wide loads must be balanced &amp; evenly cantered.</p> <p>14. Load to be carefully deposited on to loading bay / drop-off point avoiding shock loading.</p> <p>15. Trained Slinger/Signaller to guide loads being placed or positioned.</p> <p>16. Avoid overloading – only as per safe working load. Load charts to be in all cab.</p> <p>17. Never travel with highly raised load. When travelling with load such as pipes, it must be secured by lashing into the fork.</p>					
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12	<b>Fueling/ Refueling of Equipment</b>	<ul style="list-style-type: none"> <li>❖ Leakage and spills</li> <li>❖ Chances of Fires</li> <li>❖ Ergonomic hazards</li> <li>❖ Generation of electrostatic energy</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fire</li> <li>➤ Land and Water Pollution</li> <li>➤ Illness</li> <li>➤ Injury</li> <li>➤ Damage to Equipment</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. Ensure the equipment/vehicle is shut off before commencing fueling/refueling.</li> <li>2. Ensure that an appropriate Spill Kit is readily available.</li> <li>3. Ensure the use of Drip trays.</li> <li>4. Keep machines and equipment clean and report any leaks or other noticeable defect.</li> <li>5. Continuously check the area adjacent to the fueling operation for possible leaks or spills.</li> <li>6. The transferring and dispensing of fuel will be done with pumping equipment, an approved hose, and a top-fill nozzle.</li> <li>7. The transfer of fuel must be stopped prior to overflowing, leaving room for expansion.</li> <li>8. All mobile refueling tanks and portable fuel containers are to be properly labelled.</li> <li>9. Fire extinguishers shall be located near the fuel storage areas and in Equipment of a suitable type and size.</li> <li>10. Smoking will not be permitted around fuel storage, and "No Smoking" signs will be posted.</li> <li>11. Appropriate emergency spill equipment will be available in the fueling area.</li> </ol>	1	3	3	L	ADOSH SF CoP 1.0 - <b>Hazardous Materials</b>
13	<b>Work at height / Use of Scaffold</b>  Erection, modification and dismantling of scaffolding (Mobile, Fixed)	<ul style="list-style-type: none"> <li>❖ Falling objects</li> <li>❖ Fall from height</li> <li>❖ Incompetent workers</li> <li>❖ Lack of supervision</li> <li>❖ Collapse of scaffold</li> <li>❖ Failure to secure the caster wheels.</li> <li>❖ Manual Handling</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries,</li> <li>➤ Hand injuries</li> <li>➤ Property damage</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ol style="list-style-type: none"> <li>1. PTW to be obtained before starting work.</li> <li>2. The assembly fitting of scaffolding must be as per manufacture's recommendations.</li> <li>3. Close supervision shall be ensured.</li> <li>4. All the parts of mobile scaffold must be compatible to be used</li> </ol>	1	4	4	M	ADOSH SF CoP 23.0 – Working at Height ADOSH SF CoP 26.0 – Scaffolding

		<ul style="list-style-type: none"> <li>❖ Pinch points</li> <li>❖ Sharp edges</li> <li>❖ Slip, Trip, Fall</li> <li>❖ SIMOPS (simultaneous activities)</li> <li>❖ Debris / Dust</li> <li>❖ Unsafe working platform</li> </ul>					<p>with one another.</p> <ol style="list-style-type: none"> <li>5. During simultaneous activity proper communication and planning must be done by the supervisor to tackle the combined hazards of different activities and to set the priority of activity to be done first.</li> <li>6. All the components of scaffolding must be free from any damage.</li> <li>7. Locks of caster wheels must be working properly.</li> <li>8. No one shall be allowed to move the scaffolding while any worker or material is over the working platform.</li> <li>9. Proper access to working platform to be ensured.</li> <li>10. Once the scaffolding is inspected by trained scaffolding inspector and tagged green only then the workers can use the scaffolding.</li> <li>11. Any changing in scaffolding during the work shall invalidate the inspection and scaffolding inspector shall re-inspect the changes in scaffold.</li> <li>12. No material shall be placed on working platform rather than the necessary tools.</li> <li>13. The safety harness must be inspected before use.</li> <li>14. 100% tie in rule to be followed working at height.</li> <li>15. Ladders must be inspected before use.</li> <li>16. Only standard ladder will be used.</li> </ol>				
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									<ul style="list-style-type: none"> <li>17. Three-point contact shall be ensured while using ladder.</li> <li>18. One worker will hold the ladder from the base.</li> <li>19. 1:4 ration / 75degree angle to be maintained while using straight ladder.</li> <li>20. The ground beneath the ladder must be even and compacted.</li> <li>21. Equipment and tools must be kept in toolbox.</li> <li>22. Scaffolding shall be erected and inspected by third party trained personals (Scaffolders &amp; Inspector)</li> <li>23. Training of workers to work at height</li> <li>24. Mandatory PPE (Safety shoes, Safety glasses, Hi Viz Vest, Coverall, Hand gloves, Helmet etc.) to be provided to all the workers</li> </ul>					
14	<b>Installation and removal of formwork</b>  Shuttering and de-shuttering	<ul style="list-style-type: none"> <li>❖ Manual handling</li> <li>❖ Protruding objects (Rebars, Nails, Wood etc.)</li> <li>❖ Incompetent workers</li> <li>❖ Entanglement while working with drill, wood cutter</li> <li>❖ Electrocutation</li> <li>❖ Lack of supervision</li> <li>❖ Falling objects</li> <li>❖ Fall from height</li> <li>❖ Improper housekeeping</li> <li>❖ Pinch points</li> <li>❖ Unsafe lifting of material</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personal injuries (Major, Minor)</li> <li>➤ Property damage</li> <li>➤ Fire</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ul style="list-style-type: none"> <li>1. Permit to work to be obtained before starting the work.</li> <li>2. All the workers must attend site safety induction.</li> <li>3. Competent workers to be deployed for the installation or removal of formwork.</li> <li>4. Only trained workers will be allowed to work with wood cutting machines. (Circular saw, table say, planer etc.)</li> <li>5. Valid third-party inspection certificate of tools and equipment must be available. (Wherever applicable)</li> <li>6. Formwork systems should be inspected by a competent person prior to use.</li> <li>7. All Formworks &amp; decking materials</li> </ul>	1	4	4	M	ADOSH SF CoP 40.0 Falsework (Formwork)

		<ul style="list-style-type: none"> <li>❖ Ergonomic issues</li> <li>❖ Fire</li> </ul>					<p>shall be free from cracks &amp; bends.</p> <ol style="list-style-type: none"> <li>8. Competent supervision should be provided.</li> <li>9. Protruding tie rods shall be protected by rebar cap.</li> <li>10. Avoid loose clothing.</li> <li>11. Installation and removal of formworks shall be according to manufacturer's recommendation.</li> <li>12. Only forms with certified lifting points shall be lifted using a crane and chains slings.</li> <li>13. Ensure rigger is available when lifting activities are carried.</li> <li>14. Taglines should be used.</li> <li>15. Edge protection to be placed.</li> <li>16. Toe boards to be placed at exposed edges if there is no up-stand.</li> <li>17. Harnesses to be used when working at exposed edges or on formwork and must be tied off to suitable anchor points.</li> <li>18. Suitable means of access to be provided to decks or formwork.</li> <li>19. Exclusion zones and warning signs to be in place underneath form work activities to prevent unauthorized access.</li> <li>20. Floor openings must be securely covered and guarded.</li> <li>21. Removal of formwork shall be done as per approved sequence of work.</li> <li>22. Site supervisor shall get clearance from site engineer and QA/QC engineer before removal of formwork.</li> <li>23. Damaged components and/or accessories shall not be used and shall be immediately replaced.</li> <li>24. Training of worker to encourage safe working postures.</li> <li>25. Correct manual handling technique should be followed.</li> </ol>				
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									<ul style="list-style-type: none"> <li>26. Mechanical means (wheelbarrows, pallet truck etc.) to be used to avoid manual handling.</li> <li>27. De-nailing to be carried out on daily basis.</li> <li>28. Utilization of proper hand- tools as home-made tools are not allowed. Ensure the correct tools are selected for the relevant task to be carried out.</li> <li>29. Ensure hand tools are stored in the correct manner and kept clean to prevent slipping or loss of grip.</li> <li>30. Ensure all tools and equipment are checked before use and returned after use to prevent loss or damage.</li> <li>31. Site mandatory PPE to be used by all the workers, engineering staff, supervisors, and site visitors</li> </ul>					
15	<b>Reinforcement work</b>  <b>Steel Cutting</b> <b>Steel Bending</b> <b>Steel Fixing</b>	<ul style="list-style-type: none"> <li>❖ Improper handling of material</li> <li>❖ Manual handling</li> <li>❖ Incompetent workers</li> <li>❖ Electrocuting while using cutting, bending machine, grinder.</li> <li>❖ Lack of supervision</li> <li>❖ Falling objects</li> <li>❖ Fall from height</li> <li>❖ Improper housekeeping</li> <li>❖ Pinch points</li> <li>❖ Ergonomic issues</li> <li>❖ Fire</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personal injuries (Major, Minor)</li> <li>➤ Property damage</li> <li>➤ Fire</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ul style="list-style-type: none"> <li>1. All the workers must attend site safety induction.</li> <li>2. Competent workers to be deployed to carry out the activity.</li> <li>3. Only trained workers will be allowed to work on machines. (Rebar bending machine, Rebar cutting machine, Grinder etc.)</li> <li>4. Valid third-party inspection certificate of rebar bending machine and rebar cutting machine must be available.</li> <li>5. Competent supervision should be provided.</li> <li>6. Protruding rebar shall be protected by rebar cap.</li> <li>7. Loose clothing shall be allowed while using bending machine and grinder.</li> <li>8. Steel fixing must be done as per approved method statement and specification.</li> <li>9. Work sequence as per method</li> </ul>	1	4	4	M	ADOSH SF CoP 40.0 Falsework (Formwork)  ADOSH-SF CoP 14.0 – Manual Handling and Ergonomics,

								<p>statement must be followed.</p> <ol style="list-style-type: none"> <li>10. Ensure rigger is available when lifting activities are carried.</li> <li>11. Taglines should be used.</li> <li>12. Edge protection to be placed.</li> <li>13. Toe boards to be placed at exposed edges if there is no up-stand.</li> <li>14. Harnesses to be used when working at exposed edges or on formwork and must be tied off to suitable anchor points.</li> <li>15. Suitable means of access to be provided.</li> <li>16. Exclusion zones and warning signs to be in place underneath form work activities to prevent unauthorized access.</li> <li>17. Floor openings must be securely covered and guarded.</li> <li>18. Training of worker to encourage safe working.</li> <li>19. Correct manual handling technique should be followed.</li> <li>20. Mechanical means (wheelbarrows, pallet truck etc.) to be used to avoid manual handling.</li> <li>21. Utilization of proper hand- tools as home-made tools are not allowed. Ensure the correct tools are selected for the relevant task to be carried out.</li> <li>22. Material shall be stored properly.</li> <li>23. Mobilization of excessive material in site shall be avoided.</li> <li>24. Temporary material storage areas shall be established.</li> <li>25. Fire prevention measures to be implemented.</li> <li>26. Site mandatory PPE to be used by all the workers, engineering staff, supervisors, and site visitors.</li> </ol>				
16	Concrete pouring	❖ Man-machine	➤ Major injuries	Who involved				<ol style="list-style-type: none"> <li>1. Safe access route to be provided.</li> <li>2. Everyone in site (operatives and</li> </ol>				ADOSH SF CoP 38.0

	<p>Mobilization of concrete transit mixer Concrete pouring Concrete washout</p>	<p>interface</p> <ul style="list-style-type: none"> <li>❖ Equipment failure</li> <li>❖ Hydraulic jet in case of leakage in derricking cylinders of concrete pump.</li> <li>❖ Falling objects</li> <li>❖ Fall from height</li> <li>❖ Improper housekeeping</li> <li>❖ Manual handling</li> <li>❖ Chemical hazard</li> <li>❖ Adverse weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>➤ Property damage</li> <li>➤ Environmental impact</li> </ul>	<p>the Task / Activity</p>	4	4	16	X	<p>visitors) must attend site safety induction before entering the site.</p> <ol style="list-style-type: none"> <li>3. Proper planning.</li> <li>4. Competent workers to be selected for the job.</li> <li>5. QA/QC engineer clearance to be obtained before starting concrete pouring.</li> <li>6. Proper supervision to be ensured.</li> <li>7. Work sequence and specifications as mentioned in approved method statement must be followed.</li> <li>8. Proper access and egress and working platform must be available before mobilization of concrete in site.</li> <li>9. Protruding steels shall be protected by mushroom cap.</li> <li>10. Proper edge protection to be installed.</li> <li>11. Plastic sheet to be placed underneath concrete pump or concrete transit mixer to contain spilled concrete.</li> <li>12. Waste or spillage to be cleaned up immediately.</li> <li>13. Trucks or pumps that are relocating to a different position must clean the chutes or pump line first.</li> <li>14. All vehicles must have valid registration.</li> <li>15. The vehicles must be inspected by the site safety team.</li> <li>16. Reverse alarm must be installed in vehicle.</li> <li>17. Supervisors must closely monitor the activity.</li> <li>18. Flagman will be provided for safe maneuvering of vehicles.</li> <li>19. Overhead clearance to be monitored positioning of concrete pump.</li> <li>20. Concrete pump must have valid</li> </ol>	1	4	4	M	<p><b>Concrete Placing Equipment</b></p>
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									<p>third-party inspection certificate.</p> <p>21. Concrete pump operator must have valid third-party training certificate.</p> <p>22. Before leaving the site, driver must ensure that the derricking cylinder / hydraulic jacks of concrete pump are closed.</p> <p>23. The area around the concrete pump and concrete transit mixer shall be barricaded.</p> <p>24. Supervisors shall ensure proper coordination to deal with SIMOPS (Simultaneous Operations).</p> <p>25. No other activity shall be allowed underneath concrete pump.</p> <p>26. Site mandatory PPE to be provided and used by all the personals in site.</p>					
17	<b>Concrete repair works</b>	<ul style="list-style-type: none"> <li>❖ Unsafe of powered tools</li> <li>❖ Manual handling</li> <li>❖ Incompetent workers</li> <li>❖ Chemical exposure</li> <li>❖ Electrocution while using powered tools</li> <li>❖ Lack of supervision</li> <li>❖ Falling objects</li> <li>❖ Fall from height</li> <li>❖ Improper housekeeping</li> <li>❖ Pinch points</li> <li>❖ Ergonomic issues</li> <li>❖ Fire</li> <li>❖ Duse</li> <li>❖ Noise</li> <li>❖ Vibration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Major injuries</li> <li>➤ Respiratory problems due to dust and chemical exposure.</li> <li>➤ Hearing impairment</li> <li>➤ Musculoskeletal injuries</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ol style="list-style-type: none"> <li>1. Inspection of powered tools before use.</li> <li>2. Selection of competent workers for the task.</li> <li>3. Use of residual current devices in electrical distribution box.</li> <li>4. Close supervision shall be ensured.</li> <li>5. Storage container and handling method as per MSDS</li> <li>6. COSHH assessment must be done for the chemicals that will be used in the activity.</li> <li>7. Correct type of abrasive disk to be used with the grinder.</li> <li>8. All tools must be internally inspected and color coded.</li> <li>9. Fire prevention measures must be in place.</li> <li>10. Proper working platform must be provided.</li> <li>11. Cable management shall be ensured to avoid hazards associated with trailing cables.</li> <li>12. Good housekeeping of the activity</li> </ol>	1	4	4	M	ADOSH SF CoP 1.0 - Hazardous Materials Version 4.0

									<p>area shall be ensured.</p> <p>13. Supervisors shall ensure proper coordination to deal with SIMOPS (Simultaneous Operations).</p> <p>14. Dust suppression arrangements must be in place.</p> <p>15. Operatives must be use site mandatory and work specific PPE (chemical gloves, respirator face shield, earplugs etc.)</p>					
18	<p><b>Water proofing</b></p> <p>Applying primer, bitumen Pasting self-adhesive waterproof sheets</p>	<ul style="list-style-type: none"> <li>❖ Fail to assign competent work.</li> <li>❖ Failed to follow MSDS for storage and handling.</li> <li>❖ Failed to arrange proper Transportation for chemicals.</li> <li>❖ Exposure to solvent vapors may result in number of health effects.</li> <li>❖ Chemical spillage</li> <li>❖ Lack of ventilation and illumination.</li> <li>❖ Personnel Injury</li> <li>❖ Chemical handling</li> <li>❖ Mixing machine used to mixing chemicals.</li> <li>❖ Chemical hazards due to the mixing and applying.</li> <li>❖ Damaged and Defective portable tools</li> <li>❖ Squish of chemical into eyes causing irritation or</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fire</li> <li>➤ Chemical burns</li> <li>➤ Breathing problems</li> <li>➤ Eye irritation</li> <li>➤ Environmental impact in case of improper disposal of chemical waste</li> </ul>	Who involved the Task / Activity	3	3	9	H	<ol style="list-style-type: none"> <li>1. All operatives must be trained and experienced for the waterproof work.</li> <li>2. Hazards associated with the chemical being used in water proofing must be communicated with the operatives involved in the activity through TBT and Pre-task briefing prior to commence the work.</li> <li>3. Ensure a well-ventilated, flameproof store with spill containment and spill clean-up kits.</li> <li>4. Storage container and handling method as per MSDS.</li> <li>5. COSHH assessment must be done for the paint and other chemicals that will be used in the activity.</li> <li>6. Adequate illumination and ventilation should be provided for the work.</li> <li>7. All chemicals must have material safety data sheets as per the instruction given by chemical company need to communicate with all operatives.</li> <li>8. Operatives must be use site mandatory and work specific PPE (chemical gloves, respirator, face shield etc.) while handling chemical</li> </ol>	1	3	3	L	<p>ADOSH-SF CoP 28.0 Hot work Operations CoP 36.0 Plant &amp; Equipment</p>

		temporary or permanent ❖ Inadequate PPE												
19	<b>Use of Generators</b>	<ul style="list-style-type: none"> <li>❖ Fire</li> <li>❖ Smoke emission</li> <li>❖ Slips, Trips &amp; falls</li> <li>❖ Excessive noise</li> <li>❖ Vibration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Burns</li> <li>➤ Carbon Monoxide poisoning</li> <li>➤ electrocution</li> <li>➤ Personnel injuries</li> </ul>	<ul style="list-style-type: none"> <li>❖ Site workers <ul style="list-style-type: none"> <li>• Site staff</li> <li>• Site visitors</li> </ul> </li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Make sure any appliance connected to the generator are specifically designed for outdoor use.</li> <li>2. Ensure the generator is grounded.</li> <li>3. Turn off engine when re-fuelling and use a funnel.</li> <li>4. Fire extinguisher to be located close to generator.</li> <li>5. Generators to be located in well ventilated areas.</li> <li>6. Always face the exhaust of generator downwind of the work area.</li> <li>7. Visually check leads on a daily basis for any damage and report any damage immediately.</li> <li>8. Keep leads out of the way so as not to cause trip hazard.</li> <li>9. Always keep generators and fuel cans in a drip tray.</li> <li>10. Avoid using in wet conditions. If unavoidable protect it from moisture.</li> <li>11. Ensure generators are maintained.</li> <li>12. Firefighting equipment to be put in place and ensure readily accessible.</li> </ol>	1	3	3	L	<b>ADOSH SF CoP 36.0 Plant &amp; Equipment</b>
20	<b>Manual handling works</b>	<ul style="list-style-type: none"> <li>❖ Lifting heavy loads</li> <li>❖ Lifting awkward loads</li> <li>❖ Twisting while lifting</li> </ul>	<ul style="list-style-type: none"> <li>➤ Chronic injury</li> <li>➤ Disability</li> <li>➤ Severe back pain</li> <li>➤ Muscle strain</li> </ul>	Who involved the	3	3	9	H	<ol style="list-style-type: none"> <li>1. Plan to eliminate the need to manually lift by using lifting equipment e.g. forklift truck or pallet trolley</li> <li>2. Review the task, the individual's</li> </ol>	1	3	3	L	ADOSH SF CoP

	<ul style="list-style-type: none"> <li>❖ Poor underfoot conditions</li> <li>❖ Top heavy bending</li> <li>❖ Previous back problems</li> <li>❖ Sharp edges</li> <li>❖ Slips/trip/fall</li> </ul>	<ul style="list-style-type: none"> <li>➤ Being struck</li> <li>➤ Aggravating previous condition</li> </ul>	Task / Activity				<p>capability, the load itself and the working environment. Where necessary clear any unwanted materials.</p> <ol style="list-style-type: none"> <li>3. Check the load prior to lift. Where the load can be split into smaller ones.</li> <li>4. Check environment for space constraints, uneven, untidy ground, and variation in work, surfaces/height, poor lighting and extremes of temperature/humidity</li> <li>5. Check individual's strength limits / physical disabilities. Where necessary team handling to be done.</li> <li>6. Ensure adequate rest periods/recovery periods are followed between lifts/activities.</li> <li>7. Use gloves that offer adequate protection and aid grip.</li> <li>8. Proper lifting techniques will be followed:</li> <li>9. - Position in front of the load with legs balanced and spread equal to shoulder width.</li> <li>10. - Bend the knees to reach the bottom of the load to get a grip; do not bend the spine.</li> <li>11. Lift load slowly by gradually straightening the legs.</li> <li>12. Do not twist spine if you need to change direction; turn whole body instead.</li> <li>13. Carry the load as close to your body and as high as your waist.</li> <li>14. Where possible unloading of materials from the delivery</li> </ol>				14.0 Manual Handling & Ergonomics
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									truck should be close to the storage area. 15. Workers to be adequately trained and instructed in manual handling techniques including adequate supervision.					
21	<b>Use of hand tools</b>	<ul style="list-style-type: none"> <li>❖ Damaged tools</li> <li>❖ Improvised tools</li> <li>❖ Sharp edges</li> <li>❖ Fall of tools from height</li> </ul>	➤ Personnel injuries	<ul style="list-style-type: none"> <li>• Site Workers</li> <li>• Site Staff <ul style="list-style-type: none"> <li>• Site Visitors</li> </ul> </li> </ul>	4	3	12	H	<ol style="list-style-type: none"> <li>1. Ensure the conditions of the hand tools are good, when obtaining from the stores.</li> <li>2. Hand tools shall not be kept on walkways and working platform</li> <li>3. Hand tools shall be kept in tool boxes whenever not in use.</li> <li>4. When accessing at height, hand tools must be place in a tool belt/tool bag. Never carry hand tools by hand when accessing/descending ladder.</li> <li>5. Tie off tools with a rope to prevent its fall while working at height or near edges.</li> <li>6. Under any circumstances never put hand tool at the back pocket that might cause injury.</li> <li>7. All tools shall be inspected for any damages on daily basis and at regular intervals. damaged must be return back to the store and tag "NOT TO USE".</li> <li>8. Don't keep any tools unattended at the height after the work.</li> <li>9. Store keeper will inspect all the new tools before issuing to site.</li> <li>10. Ensure that no homemade/make shift tools are used at site.</li> <li>11. Always wear suitable hand</li> </ol>	1	3	3	L	Manufacturer's Manual

									gloves when using hand tools. 12. Workers must be adequately trained and instructed on safe working procedures through toolbox and/or pre-start briefing. 13. Found defects must be removed immediately from service.					
22	<b>Working in hot conditions – Sun safety</b>	<ul style="list-style-type: none"> <li>❖ Direct exposure to sunlight</li> <li>❖ Extreme hot weather condition</li> </ul>	<ul style="list-style-type: none"> <li>➤ Heat related Illnesses / disorders</li> <li>➤ Sun Burn All persons (indoors and out)</li> <li>➤ Dehydration</li> <li>➤ Heatstroke / Heat stress</li> <li>➤ - Skin Cancer</li> </ul>	<ul style="list-style-type: none"> <li>• Site Workers</li> <li>• Site Staff</li> <li>• Site Visitors</li> </ul>	4	3	12	H	1. Provision of appropriate rest area during break time with sufficient cooling system to acclimatize and reduce body heat such exposure after working under hot environment. 2. Newly mobilized workers shall be acclimatized and never assigned heavy task or direct exposure to hot environment. 3. Re-schedule hard work activities in a coolest part of the day where possible. Ensure no worker work alone in a heat stress area. 4. Direct exposure to sun, it is recommended that sunscreen of at least factor 15 and above is used on exposed body parts i.e. face, arms, hands, ears and neck. 5. In order to get the full effect from your sunscreen the following must be observed: <ul style="list-style-type: none"> <li>a. Use sunscreen with UVA and UVB sun protection factor (SPF) 15+</li> <li>b. Apply sunscreen 10-15 minutes before going outdoors</li> <li>c. Ensuring good coverage of skin area</li> <li>d. Applying every 2 hours, or as directed on the product</li> </ul>	1	3	3	L	ADOSH SF CoP 11.0 <b>Safety in the Heat</b>



									<p>be conducted to the workers for the necessary precautions in avoiding heat related illnesses.</p> <p>15. Ensure the availability of trained first aider to summons in case of emergency.</p> <p>16. Adequate PPE (i.e. helmets, t-shirts (Long sleeves are preferable), high visibility vest, long pants, safety boots) and proper clothing during when working under high temperature e. g. lightweight, cotton and light coloured)</p> <p>17. Tinted glasses should be worn by operators of plant to avoid being dazzled during operation of machines</p>					
23	<b>General Electrical safety</b>	<ul style="list-style-type: none"> <li>❖ Fire</li> <li>❖ Contact with faulty electrical conductor</li> </ul>	<ul style="list-style-type: none"> <li>➤ Building Damage</li> <li>➤ Severe Burns</li> <li>➤ Electrocution</li> <li>➤ Death</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electricians</li> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Do not use electrical boxes or panels to store tools, small parts, or personal belongings.</li> <li>2. Do not store materials in the immediate vicinity of electrical equipment.</li> <li>3. Before closing a switch or starting up equipment or machinery, be sure no one is in a position to be injured.</li> <li>4. Safety devices, guards, overload relays, limit switches, fuses, circuit breakers, etc. shall not be removed, blocked, altered, bypassed or otherwise adjusted to circumvent their intended protective feature.</li> <li>5. Be sure that circuits are locked out before drilling into a junction box or panel.</li> <li>6. Covers on electrical boxes shall</li> </ol>	1	4	4	M	ADOSH SF CoP 15.0 Electrical Safety

								<p>be replaced when work is complete.</p> <ol style="list-style-type: none"><li>7. All electrical wiring, circuits and boxes must be properly protected at all times.</li><li>8. All portable electric power tools shall be approved and double insulated, and suitable for the intended task, the environment and voltage.</li><li>9. Ensure that defective tools and equipment are tagged and immediately removed from service.</li><li>10. Do not use extension cords or electrical tools with damaged casings, exposed wires or other defects.</li><li>11. Only authorized personnel are allowed to install, repair or adjust electrical equipment.</li><li>12. Inspect cords before each use and ensure that only properly rated cords are used (i.e. indoor/outdoor).</li><li>13. Ensure that the plug is pulled when unplugging, not the cord.</li><li>14. Ensure enough slack is provided to prevent strain on the plug or receptacle.</li><li>15. Cords should be kept clean and free of kinks and insulation breaks.</li><li>16. Electrical cords and cables will be kept off the ground to avoid damage and to minimize tripping hazards.</li><li>17. Operation of Disconnect switches for high energy equipment requires special</li></ol>					
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									immediately withdrawn from service.					
25	<b>Masonry works</b>	❖ Contact with cement ❖ Inhalation of cement dust	<ul style="list-style-type: none"> <li>➤ Skin irritation / burns</li> <li>➤ Eye irritation damage</li> <li>➤ Respiratory irritation / disorders</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Adequate ventilation system to be provided at working area, avoid generation of airborne particles.</li> <li>2. Procure and comply with Materials Safety Data Sheets for the products used.</li> <li>3. COSHH Assessment to be completed and communicated to the work force.</li> <li>4. Always wear long sleeves when working with wet concrete.</li> <li>5. Barrier creams to be apply where necessary.</li> <li>6. All dangerous substances to be clearly labelled and stored in the designated hazardous materials storage area.</li> <li>7. Provide all necessary information, training and instructions to employees using substances.</li> <li>8. All dust and fumes must be regarded as a hazard.</li> <li>9. Provide appropriate PPE and enforce its' use by the masons.</li> <li>10. Monitor and check storage and disposal facilities.</li> <li>11. In case of sensitization, first aid measures must be carried out immediately and seek medical assistance in severe condition.</li> <li>12. If eye irritation occurs, continue eye flushing for at least 15 minutes and seek further medical advice.</li> <li>13. Never leave excess material every after shift at the working</li> </ol>	1	3	3	L	ADOSH SF CoP 38.0 Concrete Placing Equipment

									area. 14. Clean all surfaces from any contaminants after completion of work activity. 15. Ensure the provision and use of suitable PPEs e.g. 16. Pre-start briefing must be given to the workers involve using chemicals. 17. In proximity to the application area must be restricted from unnecessary movement.					
26	<b>Use of Concrete Plastering Machine</b>	<ul style="list-style-type: none"> <li>❖ Electrocution.</li> <li>❖ Contact with rotating parts of machine.</li> <li>❖ Trip, Slip &amp; Fall Hazard</li> <li>❖ Direct Contact or continuous skin Contact with cement (wet Concrete)</li> <li>❖ Dust Emissions and exposure to air borne dust</li> <li>❖ Exposure to Cement Dust</li> <li>❖ Pouring concrete into structural cavities followed by curing</li> <li>❖ Immediate or delayed irritation of the eyes.</li> <li>❖ chemical burns and blindness</li> <li>❖ Effects of Breathing, Irritation in Nose and Throat</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electric Shock,</li> <li>➤ Burns</li> <li>➤ Electrocution</li> <li>➤ Death</li>   <li>➤ Potential contamination of soil and groundwater depending on type of concrete and whether other chemicals are used.</li> <li>➤ Skin ,Ulcers, Skin Burns</li> </ul>	Who involved the Task / Activity	4	4	16	X	<p>Approved method statement must be in place prior to start the work activity.</p> <p>Trained competent persons to only operator maintain any specialized tools or equipment. Inspections carried out and recorded.</p> <p>Permit to Work issued for activity, with isolation's /lock offs to existing services carried out. Where ventilation is poor, local exhaust ventilation will be provided.</p> <p>Identified in the Method Statement &amp; Risk assessment</p> <p>Ensure equipment is safe &amp; fit for use through physical inspections &amp; record same.</p> <p>ADM approved 3rd party certificate should be available for machine &amp; operator competency. Ensure the cables are not laying in water.</p> <p>Ensure the provision and use of suitable PPEs e.g.</p>	1	4	4	M	<p>ADOSH SF CoP 15.0 Electrical Safety</p> <p>ADOSH SF CoP 36.0 Plant &amp; Equipment</p> <p>ADOSH SF CoP 1.0 Hazardous Materials</p>



									assessment must be prepared and communicate the necessary precautions to involve personnel. 9. Avoid open / empty containers inside or nearby storage area. 10. Ensure storage area must be free from any source of ignition and area should be well-ventilated to avoid accumulation of highly flammable vapours including containers of chemicals where a temporary storage has been arranged onsite. 11. Maintain chemical register and copies of MSDS sheets. Only competent store keeper to monitor and maintained chemical store. 12. Storage area only access by authorized person. Name of key personnel must be posted at the store. 13. Emergency contact numbers to be posted at the store including the provision of first aid boxes.					
28	<b>Handling &amp; Use of Chemicals</b>	<ul style="list-style-type: none"> <li>❖ Accumulation of flammable vapour.</li> <li>❖ Contact of chemicals</li> <li>❖ Misuse of chemical.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fire / explosion</li> <li>➤ Skin irritation / skin burn.</li> <li>➤ Eye irritation damage</li> <li>➤ Respiratory irritation / disorder</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Ensure proper storage of materials in a well-ventilated area and sealed condition, away from direct sunlight or extreme temperature.</li> <li>2. Avoid storing materials close to ignition sources or combustible materials.</li> <li>3. Exclusion zone or fence off of the storage area and ensure clear access and ensure only authorized have access to the storage area.</li> </ol>	1	4	4	M	ADOSH SF CoP 1.0 Hazardous Materials

								<ol style="list-style-type: none"><li>4. Warning signs must be posted outside storage area indicating the materials being stored.</li><li>5. Firefighting equipment to be put in place and ensure readily accessible.</li><li>6. Clear instruction must be given when materials arrive onsite and to dictate where materials will be stacked/stored.</li><li>7. Upon arrival, onsite, materials should be appropriately and securely attached its labels so that it cannot be inadvertently detached during use, transport and storage. Unleveled or inappropriately leveled materials should remove onsite immediately.</li><li>8. MSDS should be in place at storage area and ensure all involve operatives were fully trained in the information prescribed in the MSDS. COSHH assessment must be prepared and communicate the necessary precautions to involve personnel.</li><li>9. Avoid open / empty containers inside or nearby storage area.</li><li>10. Ensure activity area must be free from any source of ignition and area should be well-ventilated/exhaustion to avoid accumulation of highly flammable vapours including</li><li>11. containers of chemicals where a temporary storage has been arranged onsite.</li><li>12. Emergency contact numbers to</li></ol>					
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									<p>be posted at the store including the provision of first aid boxes.</p> <p>13. Ensure the provision and use of suitable PPEs e.g. gloves, respiratory and eye protection, etc.</p> <p>14. Workers to maintain high standard of personal hygiene after working with hazardous substances.</p> <p>15. In proximity to the application area must be restricted from unnecessary movement.</p> <p>16. Ensure chemicals to be used only for their correct purpose only.</p> <p>17. Pre-start briefing must be given to the workers involve using chemicals</p>					
29	<b>Hot Work(Welding/cutting/Bracing)</b>	<ul style="list-style-type: none"> <li>❖ Striking Molten particles</li> <li>❖ Fumes</li> <li>❖ Radiation</li> <li>❖ Tripping hazard</li> <li>❖ Contact with faulty electrical components</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electric Shock, Burns, Electrocution, Fatality</li> <li>➤ Injury to eyes/Flying objects, Cuts , Tinnitus</li> <li>➤ Noise Induced</li> <li>➤ Hearing Loss,</li> <li>➤ Injury to Respiratory Tract/diseases/cancer acute and chronic</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Hot work procedure and PTWsystem will be followed.</li> <li>2. Competent workers will be deployed for any hot work activities being performed at site</li> <li>3. Providing adequate firefighting equipment</li> <li>4. Regular fire watch will be provided to ensure no chance of fire existing even after completing the task.</li> <li>5. Regular Tool Box Trainings will be arranged for the hot work groups and the records will be maintained.</li> <li>6. Site HSE team will regularly monitoring the activities and ensure all safety measures in place during the execution of</li> </ol>	1	4	4	M	ADOSH SF CoP 28.0 Hotwork Operation

									<p>hot works at site.</p> <p>7. A visual inspection of all the electrical connections will be done by the competent person prior to start the Work.</p> <p>8. Welders and helpers to use leather hand gloves.</p> <p>9. Welders to use PPE including welding shield of shade 11 DIN, welders hand gloves, apron and safety helmet/coverall.</p> <p>10. Suitable fire extinguisher must be made available in the welding area. In addition, bucket of water to be provided.</p> <p>11. Use of appropriate respirator against fumes (use N95 type of respiratory filter / masks). Welder must position away from welding fumes.</p> <p>12. Work area must return in safe condition once hot work is completed and ensure PTW must be signed off by the authorized person.</p>					
30	<b>Compressed Gas and Air -Cylinders (For gas welding works)</b>	<ul style="list-style-type: none"> <li>❖ Damaged hoses / coupling</li> <li>❖ Damaged pressure valve / regulator</li> <li>❖ Tripping hazard</li> <li>❖ Fall of cylinder</li> <li>❖ Tripping hazard</li> </ul>	<ul style="list-style-type: none"> <li>➤ Burns</li> <li>➤ Fire</li> <li>➤ Explosion</li> <li>➤ Personal injuries</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	4	4	16	X	<p>1. High pressure gas systems and storage cylinders will be thoroughly inspected prior to the commencement of the task</p> <p>2. The regulators and valves associated with the system will be inspected for their proper functioning and ensure that the selection is proper for the gas</p>	1	4	4	M	ADOSH SF CoP 49.0 Compressed Gases & Air

									<p>and the output pressure</p> <ol style="list-style-type: none"> <li>3. The storage of the gas cylinder will be in the designated place and the transpiration will be by using proper trolleys and will be secured properly</li> <li>4. The air compressor system will be equipped with whip hose arrangements</li> <li>5. Adequate ventilation will always be ensured</li> <li>6. All employees associated with the task will be trained for the hazards and precautionary measures.</li> <li>7. Never drop or roll cylinder. Use cylinder built trolley to transfer/move cylinders.</li> <li>8. Always locked cylinder storage area. Signage to be posted indicating impending hazard.</li> <li>9. Cylinder MUST not be stored in a manner to prevent from a hazard by tipping, falling or rolling.</li> <li>10. Cylinder MUST not place in direct contact with ground surface and MUST protect against weather.</li> <li>11. Provide appropriate PPE and enforce its' use.</li> </ol>					
31	<b>Use of Ladders</b>	<ul style="list-style-type: none"> <li>❖ Fall of person due to: Overreaching/overloading</li> <li>❖ Improper positioning</li> <li>❖ Unsecured ladder</li> </ul>	➤ Personnel Injuries	Who involved the Task / Activity	4	3	12	H	<ol style="list-style-type: none"> <li>1. Ladders and stepladders are secured and use restricted to authorized staff only.</li> <li>2. Employees have been instructed to visually check ladders before each use.</li> </ol>	1	3	3	L	ADOSH SF CoP 37.0 Ladders

		<ul style="list-style-type: none"> <li>- Damage ladder</li> <li>❖ Collapse of ladder</li> <li>❖ Fall of Materials</li> </ul>							<ol style="list-style-type: none"> <li>3. Right personal performing the right task.</li> <li>4. Maintain 3 Point contact during the climbing and get down.</li> <li>5. Ladder shall be erected 75 degree slope position and maintain 1:4 ratio.</li> <li>6. Ladders check are completed regularly.</li> <li>7. Tasks Accessed before commencing, taking account of Weather conditions, location of power lines etc.</li> <li>8. Defective ladders are removed from service and secured to prevent use until repaired, using proper fittings or disposed.</li> <li>9. Operatives are trained and competent in the use of ladders.</li> <li>10. Ensure the use of slip resistant appropriate footwear when using ladders.</li> </ol>					
32	<p><b>Welfare Facilities</b></p> <p>(Toilets, drinking water station, smoking area)</p>	<ul style="list-style-type: none"> <li>❖ Fire hazards due to accumulation of combustible waste</li> <li>❖ Poor illumination/ventilation</li> <li>❖ Lack of cleaning / maintenance</li> <li>❖ Damage cable connected drinking station</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> <li>➤ Suffocation</li> <li>➤ Burns</li> <li>➤ Ill-health</li> <li>➤ Electrocutation / electric shock</li> </ul>	<ul style="list-style-type: none"> <li>• Site workers</li> <li>• Site Staff</li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Welfare areas to be keep clean at all times. No eating on designated rest areas.</li> <li>2. Use only designated smoking receptacles inside the smoking both. Smoking outside the smoking booth is not permitted.</li> <li>3. Keep smoking booth free from any combustible &amp; flammable materials.</li> <li>4. Ensure the availability of suitable fire extinguisher placed in accessible location.</li> <li>5. Area must be regularly cleaned</li> </ol>	1	3	3	L	<p>ADOSH SF CoP 8.0 General Workplace Amenities</p> <p>CoP 15.0 Electrical Safety</p>

								<p>and maintained.</p> <p>6. Signboard to post warning signs indicating the health hazards of smoking.</p> <p>7. Rest areas inside the building must be keep clear of any obstruction. Ensure standard illumination and ventilation arrangement at all times.</p> <p>8. Rest areas must be securely barricaded with tubular pipes and green net and ensure the provision of safe access. Warning signs to be posted indicating designated rest area.</p> <p>9. During lunch break, HSE team must adequately monitor to ensure workers utilized only designated resting areas and to ensure proper arrangement.</p> <p>10. Toilet must be routinely cleaned and ensure the availability of water supply and hand soap.</p> <p>11. Cleaning and maintenance need also to observed in other areas including drinking water station, ablution to prevent generation of algae causing harmful bacteria.</p> <p>12. Competent electrician to regular check all temporary electrical installation. PAT testing to be done to ensure the integrity within the electrical component.</p> <p>13. Cables must be routed in elevated areas to avoid accidental damage from sharp edges and kept away from wet surface.</p>					
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33	<b>Night Work Activities</b>	<ul style="list-style-type: none"> <li>❖ Poor visibility</li> <li>❖ Lack of concentration at work.</li> <li>❖ Slips, trips, and falls.</li> <li>❖ Over-speeding vehicles and Equipment</li> <li>❖ Noise at Night</li> </ul>	<ul style="list-style-type: none"> <li>➤ Vehicle Accident</li> <li>➤ Personal injury</li> <li>➤ Equipment damage</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site Workers</li> <li>➤ Site Staff</li> <li>➤ Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Effective supervision is to be ensured.</li> <li>2. All work areas are to be suitable visibility for works with artificial lighting and adequate lighting arrangements should be made.</li> <li>3. Lighting towers are to be in place and checked to ensure they are in good working order prior to the work commencing.</li> <li>4. Vehicles and Equipment must follow site Speed limits and be reduced to 10 KM/h in all areas on-site at nighttime.</li> <li>5. Headlights on Equipment must be in good working condition and cleaned regularly during night work as any dirt on the lenses will greatly reduce visibility.</li> <li>6. Weather forecast to be checked in advance of the work by the Construction Team to ensure it is suitable to proceed.</li> <li>7. All Equipment to have flashing beacons, which are to be switched on and in good working condition.</li> <li>8. All personnel must wear high-visibility vests and other mandatory PPE.</li> <li>9. Reflective type high-visibility Life vests to be used while working at night.</li> <li>10. Ensure that the work areas are always maintained in a safe condition and that they are left</li> </ol>	1	4	4	M	<b>ADOSH SF CoP 8.0 – General Workplace Amenities</b>



- ❖ Pinch points
- ❖ Unauthorized operation
- ❖ Adjacent structure
- ❖ Lack of supervision

- provided.
9. Lifting activity must be supervised by competent lifting supervisor.
  10. Competent rigger must be available.
  11. Good communication shall be ensured among lifting crew.
  12. Radio sets to be used in case of visual obstruction.
  13. Selection of lifting equipment (crane, telehandler, backhoe) will be carried out after careful assessment of load and site condition.
  14. Only standard accessories / attachments shall be used with the equipment.
  15. The whole crane maneuvering area shall be barricaded, and caution signage shall be posted around the area.
  16. Access will be controlled in the activity area stop any unauthorized access.
  17. Separate pedestrian access to be provided (if required)
  18. The crane, all the lifting gears shall have
  19. valid third-party inspection from an approved third party safety consultancy.
  20. Only trained, authorized and holder of valid driver's license with the corresponding category shall drive and operate the crane.
  21. The load bearing capacity of the area shall be determined to know whether it can bear the

								<p>load of crane of not.</p> <p>22. The riggers must be trained by an approved third party safety consultancy.</p> <p>23. The lifting activity shall be carried out under close supervision.</p> <p>24. No one will be allowed to stay under suspended load.</p> <p>25. Minimum 16mm dia. Rope shall be used as tag line to control the movement of suspended load.</p> <p>26. Trial lifting to be practiced before raising the load.</p> <p>27. Center of gravity to be considered to stabilize suspended load.</p> <p>28. Effective communication shall be ensured among crane operator and rigger.</p> <p>29. Emergency contact numbers of all authorities having underground services in crane activity area must be posted.</p> <p>30. Emergency procedure must be in place and all the workers must be informed about emergency response.</p> <p>31. In case the activity is obstructing any road/ Pedestrians access the alternate access must be provided and standard signage to be installed to lead the road users /pedestrians throughout the diversion/detour/alternate access.</p> <p>32. Site mandatory PPE shall be used by all operatives</p> <p>33. Lifting appointed person to be</p>					
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									monitoring all the lifting activities and to prepare the lifting plans accordingly.					
35	<b>Use of MEWP</b>	<ul style="list-style-type: none"> <li>❖ Overturning of the equipment due to:</li> <li>❖ Unstable surface</li> <li>❖ Adverse weather condition e.g. high wind &amp; storm</li> <li>❖ Faulty equipment</li> <li>❖ Fall of persons ,equipment &amp; tools.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fatality</li> <li>➤ Serious Personnel Injuries</li> </ul>	<ul style="list-style-type: none"> <li>• Site workers</li> <li>• Site staff</li> <li>• Site visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Must be positioned in a firm level surface. Inspect areas where the machine will be situated.</li> <li>2. Avoid stepped gradient or near newly backfilled areas or near edge of excavation pit.</li> <li>3. Do not drive on side slopes or unlevelled surfaces.</li> <li>4. Extra precautions must be observed when driving the equipment, under any circumstances “NEVER USE MOBILE PHONE” while driving.</li> <li>5. Ensure machine must be equipped with driving interlock system to prevent moving until lift/boom is being completely lowered.</li> <li>6. Ensure the provision of safety auxiliaries’ e.g. stabilizer and load indicator, dead man safety control foot switch and emergency controls located at upper and lower control station and ensure it should be accessible. Ground control emergency stop must override the platform control.</li> <li>7. Ensure the equipment must be fitted with emergency lowering device to be use in the event of power failure or malfunction.</li> <li>8. In case of adverse weather (e.g. strong wind &amp; storm) temporary cease activity. Wind speed must be monitored, and</li> </ol>	1	4	4	M	<p>ADOSH SF CoP 34.0 Safe Use of Lifting Equipment &amp; Lifting Accessories</p> <p>ADOSH SF CoP 44.0 Traffic Management &amp; Logistics</p> <p>ADOSH SF CoP <b>23.0 Working at Height</b></p>

									<p>advices involve personnel accordingly.</p> <ol style="list-style-type: none"><li>9. Machine must be inspected and certified by 3rd party every 6months and pre-use check by the operator to ensure safe operation. Any found defects must be reported immediately to the supervisor.</li><li>10. Immobilized and de-energized the machine when not is using to avoid unauthorized use – never left unattended while the machine is working.</li><li>11. Never park the equipment with the platform elevated.</li><li>12. Extra precaution must be observed to avoid bouncing of the bucket that may imbalance the machine.</li><li>13. SWL of the platform to be marked on the equipment and ensure does not exceed the intended load. Follow manufacturer’s instructions.</li><li>14. Ensure load chart indicator should be affixed on the machine - boom lifts must be operated within the safe operating limits.</li><li>15. Never use the bucket to support the load or materials being suspended that could affect the load limit.</li><li>16. Never placed/stacked excessive materials into the platform.</li><li>17. Never drop any object from the platform.</li></ol>							
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									<ul style="list-style-type: none"> <li>18. Never use the platform or railings to support the load or materials being suspended that might become unstable.</li> <li>19. Ensure the provision and use of full body harness with fall arrest system and must be hook in the designated anchorage point on the bucket at all times. Trained operators in the use of fall protection system and working at height.</li> <li>20. Only operates by adequately trained, competent and authorized operator.</li> <li>21. Ensure the equipment must be fitted with emergency lowering device to be use in the event of power failure or malfunction.</li> <li>22. Never attempt to leave the platform while it is in an elevated position such as climbing off the platform to gain access to an elevated area.</li> <li>23. Platform surface must be non-slippery and with self-draining system.</li> <li>24. Operator must be adequately instructed in the safe use and operation including the emergency protocols to be followed in case of emergency.</li> </ul>					
36	<b>Housekeeping</b>  Material stacking / arrangement Clearing the activity	<ul style="list-style-type: none"> <li>❖ Slip, trip and fall</li> <li>❖ Dust / Debris</li> <li>❖ Repeated movements</li> <li>❖ Poor posture</li> <li>❖ Manual handling</li> </ul>	<ul style="list-style-type: none"> <li>➤ Injuries due to slip, trip and fall</li> <li>➤ Eye irritation</li> <li>➤ Back pain /</li> </ul>	<ul style="list-style-type: none"> <li>• Site workers</li> <li>• Site staff</li> <li>• Site visitors</li> </ul>	4	4	16	X	<ul style="list-style-type: none"> <li>1. Traffic management plan to be adhered to and designated traffic routes used.</li> <li>2. Ensure the provision of trained banks man – restrict unnecessary movement around the machine.</li> </ul>	1	4	4	M	ADOH SF CoP 44.0 <b>Traffic Management &amp; Logistics Management</b>

	area from unwanted material using machineries.	❖ Crush by vehicle movement	sprain				<ol style="list-style-type: none"> <li>3. Regular housekeeping of activity area must be practiced before during and after the work.</li> <li>4. Proper material stacking to be done.</li> <li>5. Store layout must be placed in front of the store including the location of firefighting equipment, escape route, alarm system and provided inside the store.</li> <li>6. Adequate lighting arrangement must be provided inside the store.</li> <li>7. Mobilization of unnecessary or excessive material must be avoided.</li> <li>8. Wheelbarrows, pallet trucks etc. to be used to avoid manual handling wherever practicable.</li> <li>9. Correct manual handling technique to be practiced.</li> <li>10. Adequate workforce must be deployed for manual handling.</li> <li>11. Temporary material storage areas to be established in site.</li> <li>12. Material segregation must be ensured.</li> <li>13. Fire prevention measures to be adhered.</li> <li>14. Access routes should always be clear.</li> <li>15. Debris should be discarded at the designated area only.</li> <li>16. Hazardous waste, if any, should be discarded separately as per the local municipality regulations.</li> <li>17. Mandatory PPE like safety</li> </ol>			
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									glasses, safety shoes, hardhat with chin strap, coverall, Hi-Vi Vest, dust mask should be used.					
37	Installation of MEP Services, Accessories and fittings .	<ul style="list-style-type: none"> <li>❖ Fall form height</li> <li>❖ Falling objects</li> <li>❖ Over loading</li> <li>❖ Protruding objects</li> <li>❖ Access &amp; egress.</li> <li>❖ Slips, Trips and fall</li> <li>❖ Poor house</li> <li>❖ Keeping.</li> <li>❖ Use of Glue Solvent, (Hazardous Substance)</li> <li>❖ Electric Shock</li> </ul>	<ul style="list-style-type: none"> <li>➤ Musculoskeletal disorders</li> <li>➤ Hand injuries</li> <li>➤ Cut &amp; bruises</li> <li>➤ Acute/Chronic adverse heath effect.</li> <li>➤ Fire</li> <li>➤ Electrocutation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site workers</li> <li>➤ Site staff</li> <li>➤ Site visitors</li> </ul>	4	3	12	H	<ol style="list-style-type: none"> <li>1. Ensure proper working platform with complete fall protection</li> <li>2. Ensured work area must be barricaded with caution signage and make sure vehicle movement should not disturb.</li> <li>3. Ensure the scaffold platform is properly erected with "Safe to use" tag.</li> <li>4. Ensure castor wheels are locked</li> <li>5. Hand tools must be secured/tethered</li> <li>6. Work materials strictly not allowed to be stored on platform except for working tools</li> <li>7. Ensure avoid over reaching and climb on handrail.</li> <li>8. Ensure unauthorised person not allowed to modify the scaffolding and if needed to any changes then must be modified.</li> <li>9. Ensure safe access to the working platform</li> <li>10. Ensure sufficient illumination in work area</li> <li>11. Ensure while fittings the GI clamp and brackets operatives must safely use drill machine to avoid finger injury.</li> <li>12. Ensure Hand tools are Stored in accordance with the manufacturer's instructions.</li> <li>13. Ensure hands are not in direct line of fire while working with hand tools.</li> <li>14. Must clean the debris after</li> </ol>	1	3	3	M	<p>ADOSH SF CoP <b>23.0 Working at Height</b></p> <p>ADOSH SF CoP <b>37.0 Ladders</b></p> <p>ADOSH SF CoP 1.0 Hazardous Materials</p> <p>ADOSH SF CoP 14.0 Manual Handling &amp; Ergonomics</p> <p>ADOSH SF CoP <b>35.0 Portable Power Tools</b></p> <p>ADOSH SF- CoP 2.0 – Personal Protective Equipment</p>

								<p>completion the job and maintain good housekeeping.</p> <ol style="list-style-type: none"><li>16. Ensure that all chemical substances have a COSHH assessment</li><li>17. Refer SDS prior to any handling of hazardous substances and ensure SDS is easily accessible at site while working with chemicals.</li><li>18. Ensured COSHH permit in place.</li><li>19. Ensure all chemical containers are properly labeled.</li><li>20. Spill kits to be available at site.</li><li>21. Ensure operatives use the correct PPE</li><li>22. Competent person to oversee the storage, use and disposal of hazardous materials.</li><li>23. Ensure that correct welfare/first aid facilities are available in the area i.e. washing facility/eye wash.</li><li>24. Proper and adequate PPE to be used always</li><li>25. Ensure all chemical containers are properly labeled.</li><li>26. Adjust work schedules so that workers are not</li><li>27. Over exposed to a hazardous chemical.</li><li>28. Wear respiratory protection</li><li>29. Ensure proper and adequate PPE to be used.</li><li>30. Eliminate the need for manual handling by using mechanical aid.</li><li>31. Supervisor must make sure while manual handling load individual task and environment</li></ol>				
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									to be considered to reduce the risk of manual handling. 32. Ensure smoking only in designated area. 33. Ensure appropriate Firefighting equipment's are in place and easily accessible.					
38	<b>Electrical work</b>	<ul style="list-style-type: none"> <li>❖ Electrocution.</li> <li>❖ Fire</li> <li>❖ Slip , trip</li> <li>❖ Electric Shock</li> <li>❖ Burns</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personnel injury</li> <li>➤ Fatality</li> <li>➤ Property damage</li> <li>➤ Permanent disability</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site workers</li> <li>➤ Site staff</li> <li>➤ Site visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Approved method statement must be in place prior to start the work activity</li> <li>2. Ensure Job safety analysis (JSA) is completed</li> <li>3. Information, instruction supervision, competent electrician, suitable PPE, suitable RCD/ELCB, suitable Db boards well cable management, PPE Signages ,LOTO systems, Access control.</li> <li>4. Only competent electricians must be employed to carry out work in accordance with good Wiring practices.</li> <li>5. Electrical items not to be handled with wet hands.</li> <li>6. Person using electrical equipment must be competent.</li> <li>7. Electrical equipment's /machines must be inspected before use for worn out cables or connections.</li> <li>8. All electrical equipment's / machines to be PAT tested.</li> <li>9. Maintain the inspection records and register.</li> <li>10. If live work is unavoidable a separate specific Hazard</li> <li>11. identification and Risk</li> </ol>	1	4	4	M	ADOSH SF CoP 15.0 <b>Electrical Safety</b>

									<p>assessment will be required.</p> <p>12. Suitable firefighting equipment to be suitably located.</p> <p>13. Tool box training prior to each task.</p> <p>14. Ensure the operatives are using the appropriate PPE when operating tools. Ear protection, gloves, eye protection, dust masks etc.</p> <p>15. Any damaged equipment to be immediately withdrawn from service.</p> <p>16. Specific Method statement and risk assessment to be approved prior to high risk electrical activities.</p>					
39	<p><b>PAINTING WORKS</b></p> <p><b>Internal &amp; External</b></p>	<ul style="list-style-type: none"> <li>❖ Fumes from Paint / Thinner</li> <li>❖ Slips, Trips and Falls</li> <li>❖ Defective Hand Tools</li> <li>❖ Manual Handling</li> <li>❖ Falling Objects ,fall from Height / Scaffoldings</li> <li>❖ Dust, Noise, Whip Lash Injuries &amp; Flying Objects</li> <li>❖ Fire &amp; Explosion due to Flammable Substances</li> <li>❖ Poor Visibility</li> </ul>	<p>Respiratory problems, Asthma, Ill-health.</p> <p>Spillages and Walkways not clear or poor housekeeping.</p> <p>Cuts to Hands</p> <p>Slips, Trips and Falls</p> <p>Back Injuries due to Manual Handling</p>	<ul style="list-style-type: none"> <li>➤ Site workers</li> <li>➤ Site staff</li> <li>➤ Site visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Paint Cans &amp; Thinners to be stored in steel containers.</li> <li>2. Containers will be positioned away from any vehicle traffic to avoid damage from collision.</li> <li>3. Pallets of paints to be unloaded by forklift only and stacked on even ground.</li> <li>4. Proper access and walkways free of obstructions shall be provided for persons carrying paints to work area.</li> <li>5. Hand gloves shall be worn when handling paint cans to avoid cuts to the hands.</li> <li>6. Ensure that Material Safety Data Sheet available at site / store.</li> <li>7. Provide adequate warning signs for paint storage areas.</li> <li>8. All Combustible/flammable</li> </ol>	1	4	4	M	<p>ADOSH SF CoP <b>23.0 Working at Height</b></p> <p>ADOSH SF CoP <b>37.0 Ladders</b></p> <p>ADOSH SF CoP 1.0 Hazardous Materials</p> <p>ADOSH SF CoP 14.0 Manual Handling &amp; Ergonomics</p> <p>ADOSH SF CoP <b>35.0 Portable Power Tools</b></p> <p>ADOSH SF- CoP 2.0 – Personal Protective Equipment</p>

								<p>materials should be removed from the work area.</p> <ol style="list-style-type: none"><li>9. Suitable fire extinguishers and fire protection systems shall be provided in the work area.</li><li>10. Keep minimum quantity of flammable materials at the work place.</li><li>11. Adequate training to be given to the workforce regarding fire risks.</li><li>12. Adequate ventilation shall be provided on the work place to extract fumes and blow fresh air.</li><li>13. Adequate training / TBT shall be given to workers regarding painting works.</li><li>14. Ensure usage of suitable PPEs such as respiratory mask, hand gloves, safety glasses.</li><li>15. Drip trays or polythene sheet shall be provided to avoid paint thinner spillage on the ground.</li><li>16. Inspect all hand tools before for any damage and repair or remove from site.</li><li>17. Ensure workers are aware in the safe and correct use of these tools.</li><li>18. Ensure all scaffoldings are inspected and scaff-tag provided for safe use Green Safe / Red Unsafe.</li><li>19. All personnel working 2 meters or above to wear Safety Harness and tied off to a suitable strong point.</li><li>20. All ladders used to be in the appropriate angle and secured</li></ol>					
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									<p>properly.</p> <p>21. Only approved scaffoldings or working platforms to be used.</p> <p>22. If mobile platforms used, ensure wheels are locked when persons working on top.</p> <p>23. If mobile platforms are moved to different locations, ensure personnel are removed before moving scaffolding to different location.</p> <p>24. Ensure area is barricaded were work is conducted at height.</p> <p>25. No materials to be stored on top of scaffold.</p> <p>26. All hoses must be inspected prior to use the air compressor.</p> <p>27. Ensure whip lash arrestor wires are installed on all connections.</p> <p>28. Ensure Work areas, walkways, access ways are supplied with sufficient lighting.</p> <p>29. All tripping hazards and obstructions to be removed for personnel to move freely.</p> <p>30. Ensure all emergency exits and assembly points are provided with sufficient lighting.</p>					
40	<b>Confined space work</b>	<ul style="list-style-type: none"> <li>❖ Failure to identify confined spaces</li> <li>❖ Unauthorized entry</li> <li>❖ Lack of appropriate confined space entry equipment and accessories</li> <li>❖ Inadequate access / egress</li> </ul>	<ul style="list-style-type: none"> <li>➤ Asphyxiation</li> <li>➤ Fatality</li> <li>➤ Fall of person</li> </ul>	Who involved the Task / Activity	4	4	16	X	<ol style="list-style-type: none"> <li>1. Confined space works must be controlled by PTW system and to be obtained to OME authorized person.</li> <li>2. Ensure proper access is provided and inspected by competent person</li> <li>3. Ensure provision of permanent watchman at the entrance of manhole</li> <li>4. Provision of adequate exhaust fan and ventilation to supply</li> </ol>	1	4	4	L	<p>ADOSH SF CoP 27.0 Confined Spaces</p> <p>ADOSH SF CoP 30.0 Lone Working</p>

❖ Fall of materials from manhole opening

5. breathable air inside manhole. Foreseeable hazards inside confined spaces shall be identified and recorded and must be introduced the appropriate control measures as per OME Confined Space Permit to Work Procedure.
6. Approved MS / RA should be communicated to all involved personnel prior to commence the activity.
7. Only competent and third party trained workers shall be permitted to work in confined spaces.
8. A Trained and competent confined space supervisor shall be appointed.
9. Top man/attendant must always to be present when operative inside the confined space.
10. Continuous exhaust ventilation system to be arranged inside the pit before and during painting works to avoid accumulation of contaminants.
11. The method of work shall include initial and periodic testing of the air quality by calibrated gas monitor to determine the presence of asphyxiating, flammable and toxic gases / vapours.
12. Atmospheric monitoring to be done in confined space manhole at all times when persons in the confined space. Acceptable entry conditions are:
  - Oxygen (O<sub>2</sub>) – greater than

									<p>19.5% and less than 23.5%  - Lower Flammable Limit LFL – less than 05%  - Carbon Monoxide (CO) – less than 35ppm  - Hydrogen Sulphide (H2S) – less than 10ppm</p> <p>13.Safe access ladder/staircase must be provided and ensure it is securely fixed.  14.Ensure all personnel that will enter the tank are trained by third party.  15.Restrict any unauthorized entry, provide warning signs indicating the ongoing activities “NO ENTRY PERMIT REQUIRED CONFINED SPACE”, and provide the list of personnel at access point of the pit, in and out system where necessary.  16.Provision of emergency rescue materials that is regularly inspected should be ensured  17.Provision of training to all workers and staff involve to the activity with regards in rescuing method in confined space.  18.Under any circumstances “NO LONE WORKING” even for short period of time.</p>					
41	<p><b>Pre-commissioning &amp; Testing and Commissioning</b>  Testing of electrical &amp; mechanical equipment's,</p>	<ul style="list-style-type: none"> <li>❖ Lack of supervision</li> <li>❖ Incompetent workers</li> <li>❖ Electrical Hazards</li> <li>❖ Use of battery</li> <li>❖ Fire</li> <li>❖ Interaction with</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electrocution</li> <li>➤ Electric shock</li> <li>➤ Burns due to shock</li> <li>➤ Service failure</li> </ul>	<ul style="list-style-type: none"> <li>➤ Site workers</li> <li>➤ Site staff</li> <li>➤ Site visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Before testing and commissioning of newly installed system PTW from all concerned parties to be obtained.</li> <li>2. Approved Electrical Safe Systems of Work (ESSW) should be followed for testing / commissioning works.</li> </ol>	1	4	4	M	<p>ADOSH SF CoP 15.0  <b>Electrical Safety</b></p> <p>ADOSH SF CoP 24.0 – Lock-out / Tag-out (Isolation)</p>



									provided to all the workers and ensure use of the same. 18. Transparent safety glasses shall be provided while working in low illuminated area.					
42	<b>Waste Management</b>	❖ Trip and Falls caused by scattered materials ❖ Incorrect disposal	➤ Generation of wastes and debris which may lead to contamination and pollution  ➤ Ground and water contamination	Who involved the Task / Activity	3	3	9	H	1. Routine inspections of containment structures and surrounding storage locations will be performed. 2. Crews shall receive training on the use. 3. Environmental incident report shall be produced and submitted to HSE Lead Engineer. 4. The site shall undergo a daily clean up including removal of general litter and construction waste 5. Construction waste shall be disposed of at designated disposal area at site . 6. Hazardous waste, if any, should be discarded separately as per the local municipality regulations. 7. Work areas should be clear from unwanted materials that are scattered everywhere. 8. Workers informed of personal hygiene requirements, wash hands after use/contact and before eating, drinking and smoking. 9. Regular monitoring shall be carried out and appropriate PPE shall be used.	1	3	3	L	ADOSH SF- CoP 54 .Waste management

43	<b>Use of concrete vibrating poker</b>	<ul style="list-style-type: none"> <li>❖ Induce excessive vibration</li> <li>❖ Machine impact</li> </ul>	<ul style="list-style-type: none"> <li>➤ Hand &amp; arm vibration syndrome</li> <li>➤ Personal injury</li> </ul>	Site Workers	3	3	9	M	<ol style="list-style-type: none"> <li>1. Avoid contact with the vibrating part while in operation.</li> <li>2. Never place the vibrating poker in a hard surface while it is still vibrating.</li> <li>3. Use of only by an adequately trained and authorized personnel.</li> <li>4. Ensure the provision of suitable gloves and enforce its use and introduce workers rotation to minimize vibration exposure.</li> <li>5. Pre-use check must be done. Found damaged must be remove from service.</li> <li>6. Never leave the equipment unattended while still vibrating.</li> <li>7. After use, vibrating poker must be placed in a dry and clear area</li> </ol>	1	3	3	L	ADOSH SF CoP 36.0 Plant & Equipment
44	<b>Use of concrete power float machine</b>	<ul style="list-style-type: none"> <li>❖ Caught on rotating parts</li> <li>❖ Contact with hot surface</li> <li>❖ Ejection of foreign materials</li> <li>❖ Fire</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personal injuries i.e. amputation</li> <li>➤ Burns</li> </ul>	Site workers <ul style="list-style-type: none"> <li>• Site staff</li> <li>• Site visitors</li> </ul>	3	3	9	M	<ol style="list-style-type: none"> <li>1. Always ensure machine with ring guards securely intact over the blade and other guards on rotating parts.</li> <li>2. Never use loose clothing and keep body parts close to the machine when running.</li> <li>3. Keep safe distance with the machine. Operator must be in safe position behind the handle during operation.</li> <li>4. Never the left the machine running unattended. Must be stored always in safe and dry location.</li> <li>5. Keep the fuel cap securely close. Refuelling must be done only in a well-ventilated area.</li> <li>6. Engine must be shut-off before refuelling and ensure no ignition source.</li> </ol>	1	3	3	L	ADOSH SF CoP 38.0 Concrete Placing Equipment

								<ol style="list-style-type: none"><li>7. Ensure machine must be fitted with safety devices including emergency stop, brake and spark arrester.</li><li>8. Never attempt to touch the engine or muffler while engine is on or immediately after turned off. Allow sufficient cooling time.</li><li>9. Machine must be thoroughly inspected by competent person.</li><li>10. Pre-use check to be done by the user. Found damage, must be refrain from service. Report immediately to the supervisor.</li><li>11. Never attempt any modification on the equipment. Damage accessories must be replaced only as per manufacturer recommendation.</li><li>12. Replacing blades must be observed extra precautions and ensure the use of suitable gloves.</li><li>13. Machine to be use only by an adequately trained, competent and authorized person and he shall on manufacturer's safe operational instruction on the machine.</li><li>14. Machine must be keep clean from debris when not in use especially on blades to prevent ejection of object during operation.</li><li>15. When cleaning, ensure machine must be de-energized.</li><li>16. Always ensure the provision of PPE (i.e. hearing &amp; eye protection) and enforce its use.</li></ol>					
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45	<b>Use of concrete mixer</b>	<ul style="list-style-type: none"> <li>❖ Working with wet mortar</li> <li>❖ Cement Dust</li> <li>❖ Lime Dust</li> <li>❖ Moving parts</li> <li>❖ Manual handling</li> <li>❖ Electricity</li> <li>❖ Petrol/Diesel</li> <li>❖ Slips, trips and falls</li> <li>❖ Excessive noise</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personal injury</li> <li>➤ Skin burns / irritation</li> <li>➤ Respiratory / eye irritation</li> <li>➤ hearing disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Site Workers</li> <li>• Site Staff</li> </ul>	3	4	12	H	<ol style="list-style-type: none"> <li>1. A competent person to be selected by the supervisor to operate the mixer.</li> <li>2. Never put any tools inside drum while rotating, i.e. shovel.</li> <li>3. All electric cables to be inspected every 3 months by the electrician and colour coded.</li> <li>4. Correct manual handling technique to be used when lifting the cement bags. Lighter bags than 50kg to be used</li> <li>5. Keep area clean and free from slip/trip hazards.</li> <li>6. Ensure equipment is safe to use prior to commencement, ensuring all guards over moving parts are in place.</li> <li>7. Wash skin if contact is made with cement.</li> <li>8. Site mixer to be sited on firm level ground.</li> <li>9. Mixer to be set-up in an area allowing sufficient ventilation for petrol / diesel fumes to exhaust away from the operation.</li> <li>10. Switch off machine prior to refuelling.</li> <li>11. Never stop the mixer with material still inside. Discharge all material prior to stopping machine.</li> <li>12. Do not overload the mixer.</li> </ol>	1	4	4	M	ADOSH SF CoP 38.0 Concrete Placing Equipment
46	<b>Use of concrete skip</b>	<ul style="list-style-type: none"> <li>❖ Overturning due to overloading</li> <li>❖ Skip falling</li> <li>❖ Trapping/Impact</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fatality</li> <li>➤ Serious personnel injuries</li> </ul>	<ul style="list-style-type: none"> <li>Site Workers</li> <li>• Site Staff</li> </ul>	3	3	9	M	<ol style="list-style-type: none"> <li>1. Lifting operations to be coordinated by the Lift Coordinator on site.</li> <li>2. Suitable cranes shall be selected for the task.</li> </ol>	1	3	3	L	

		<ul style="list-style-type: none"> <li>❖ Injuries</li> <li>❖ Contact with overhead power lines;</li> <li>❖ Wind;</li> <li>❖ Contact with wet concrete;</li> </ul>	<ul style="list-style-type: none"> <li>➤ skin burns / irritation</li> </ul>	<ul style="list-style-type: none"> <li>• Site Visitor</li> </ul>					<ol style="list-style-type: none"> <li>3. Cranes operator must be trained, competent and authorised. They must be in possession of third party certification.</li> <li>4. Only trained, competent and authorised personnel to carry out the duties of the Banks-man / Slinger.</li> <li>5. Banks-man/slinger to be used for all crane operations e.g. lifting the concrete skip.</li> <li>6. Crane to be inspected and certified by a third party on an annual basis.</li> <li>7. Crane to be inspected by the operator on a daily basis before use and checklist to be completed.</li> <li>8. Only certified lifting gear to be used including a certified concrete skip. Lifting gear to be inspected by a third party every 6 month. Lifting gear to be inspected on site every 3 months and colour coded. Lifting gear to be inspected on site prior to use by the Banks-man/Slinger.</li> <li>9. All lifting operations to be coordinated on site by the Lift Co-coordinator.</li> <li>10. Tag lines to be used with the skip.</li> <li>11. Concrete outline lock should be checked before lifting to avoid concrete falling on way.</li> <li>12. No personnel to walk under the loads.</li> <li>13. Concrete delivery driver to be kept a safe distance away from the pour.</li> </ol>			<p>ADOSH SF CoP 34.0 Safe Use of Lifting Equipment &amp; Lifting Accessories</p> <p>ADOSH SF CoP 38.0 Concrete Placing Equipmen</p>
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									14. Wind speeds should be checked before the pour commences. 15. Ensure safe access for concrete delivery trucks to refill.				
47	<b>Cable laying works - Use of cable drum trolley</b>	<ul style="list-style-type: none"> <li>❖ Fall of cable drum into excavation</li> <li>❖ Roll of cable drum</li> <li>❖ Topple down of cable drum</li> <li>❖ Failure of cable drum jacks</li> </ul>	➤ Serious personnel injury	Site Workers • Site Staff • Site Visitor	4	4	16	X	<ol style="list-style-type: none"> <li>1. Cable drum trolley MUST be positioned keeping away from excavation edge (at least 1 meter), slope and unstable surface.</li> <li>2. Ensure cable drum trolley must be appropriately set-up and sited in firm level surface.</li> <li>3. MUST be tested &amp; certified by 3rd party company.</li> <li>4. SWL MUST be marked on cable drums indicating the intended load.</li> <li>5. Cable drum MUST be positioned away from access.</li> <li>6. Where necessary, drum MUST be provided with wedges</li> <li>7. Cable drum jacks MUST be inspected by a competent person ensuring free of any hydraulic leakage/failure in the system.</li> <li>8. Daily visual check MUST be done by the user confirming hydraulic components are safe to use.</li> <li>9. Cable pulling area MUST be fully barricaded and sign posted indicating activity in progress.</li> <li>10. Trolley jack MUST be properly maintained ensuring the suitability of operation as per manufacturer's instruction.</li> <li>11. Operatives involve MUST be</li> </ol>	1	4	4	M

									appropriately instructed in safe system of work.					
									12. Pre-start briefing to be conducted prior to each shift ensuring all precautions has been provided.					
48	<b>Use of Winch machine</b>	<ul style="list-style-type: none"> <li>❖ Entangled with rotating parts.</li> <li>❖ Fall of machine into excavation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> </ul>	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Protective guard MUST be securely intact against the rotating parts.</li> <li>2. Workers involved MUST be trained and competent.</li> <li>3. Use only by authorized person holding a proof training.</li> <li>4. Machine MUST be inspected and tagged before using onsite to ensure a safe operation.</li> <li>5. Pre-operation checks MUST be done by the users ensuring safe to use.</li> <li>6. Loss clothing MUST be avoided when operating the machine.</li> <li>7. Activity MUST be well-supervised by competent person.</li> <li>8. Restrict unnecessary movement around the machine, warning sign to be posted.</li> <li>9. Where a long cable works, provide suitable form of communication e.g. two-way radio.</li> <li>10. Pre-start briefing to be given taking into account the necessary precautions with the activity.</li> </ol>	1	4	4	M	ADOSH SF CoP 36.0 Plant & Equipment

49	<b>Lock out / tag out</b>	❖ Contact with live conductors	<ul style="list-style-type: none"> <li>➤ Electrocution / Electric shock</li> <li>➤ Electrical burns / injuries</li> </ul>	Site Workers • Site Staff • Site Visitor • Electrician	4	4	16	X	<ol style="list-style-type: none"> <li>1. An “Energy Control Board” will be located in each area consisting of energy control locks, tags, hasps, lock box.</li> <li>2. Isolation Point Control Log and Personal Lock Control log will be completed for each activity.</li> <li>3. A competent individual designated as the Authorized Worker.</li> <li>4. Each Electrical energy area (room) will be lockable and only accessible to personnel as authorized by OME management.</li> <li>5. Signage will exist at each entrance noting “Danger High Voltage” and “Authorized Personnel Only, please report to OME electrical supervisory staff prior to entry”.</li> <li>6. Authorized Workers must be given notice in writing of electrical energy control lockout prior to 8:00 AM of the day the lockout is required.</li> <li>7. Sign up board is located at entrance to electrical room.</li> <li>8. System Description complete with tags, reason, and expected duration information is required.</li> <li>9. Authorized Workers will complete review of system and/or equipment and complete isolation point control log.</li> <li>10. All affected personnel to meet at electrical energy area (room) and complete Personal Lock Control Log</li> <li>11. Authorized Worker lock will be</li> </ol>	1	4	4	M	ADOSH SF CoP 15.0 Electrical Safety ADOSH SF CoP 24.0 Lock-out Tag-out (Isolation)
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									<p>installed first and then all affected personnel will then install locks, lockout effectiveness will be tested (try and clear).</p> <p>12. In the event that a lockout is required to be removed during the day this should be communicated at the time of lock out and a meeting in the electrical energy area (room) will be established.</p> <p>13. Locks are removed by affected personnel first and Authorized Worker removes lock last.</p> <p>14. Personal Lock Control Log and Isolation Point Control Log to be updated accordingly.</p> <p>15. A Site Specific Electrical Energy Lockout Safe Working Practice will be developed for each project by a competent person.</p> <p>16. The Site Specific SWP will be communicated to all affected personnel &amp; will be included in Site Specific Health &amp; Safety Plan.</p>					
50	<b>Battery charging &amp; discharging</b>	<ul style="list-style-type: none"> <li>❖ Battery explosion due to generation of highly flammable hydrogen gas</li> <li>❖ • Fire / spark</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> <li>➤ Burns</li> </ul>	<p>Site Workers</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> <li>• Technician</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Must be done with adequate ventilation arrangement.</li> <li>2. Physical condition of batteries must be thoroughly check for any sign damage, crack on housing, etc. Found damage must be remove immediately.</li> <li>3. Constantly check battery electrolyte temperature and ensure not exceeding the limit as specifications.</li> <li>4. After charging, battery should be allowed to cool down to ambient</li> </ol>	1	4	4	M	ADOSH SF CoP 1.0 Hazardous Materials

								<p>temperature before discharging.</p> <ol style="list-style-type: none"><li>5. Never allow batteries to remain fully in discharge condition that could be resulted to potential damage.</li><li>6. All battery components including connectors, terminals and cables must be adequately check ensuring in proper working condition.</li><li>7. Ensure cables and connectors must be within appropriate terminal and must be adequately tighten.</li><li>8. Thoroughly check electrolyte water levels in all batteries.</li><li>9. Ensure battery vent caps must be securely covered before charging.</li><li>10. Ensure the use of necessary PPEs including safety glasses to protect from acid splash.</li><li>11. Ensure adequate fire precaution measures including no smoking/no open flames near batteries and testing area must be free from other flammable &amp; combustible materials.</li><li>12. Never use sparking tools and remove watches and jewelries.</li><li>13. Always keep the top of batteries clean and free from any foreign materials to prevent ground short &amp; corrosion.</li><li>14. Power off the charger before connection to the battery to avoid sparking.</li><li>15. Only authorized person and ensure adequately trained and</li></ol>					
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									competent with the task.				
51	<b>Use of pressure grouting equipment</b>	<ul style="list-style-type: none"> <li>❖ Caught on rotating parts</li> <li>❖ Hose connection failure</li> <li>❖ Fall of machine</li> </ul>	➤ Personnel injury	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	3	3	9	M	<ol style="list-style-type: none"> <li>1. Mixing container should be adequately covered before application starts.</li> <li>2. Pouring of materials into the container should machine should de-energized.</li> <li>3. Hoses connections must be secured with standard fittings intended for the pressured applied to the machine.</li> <li>4. Machine should be fitted with the adequately working injection valve and standard hoses.</li> <li>5. Apply pressure only as per manufacturer's recommendation. Ensure machine equipped with the adequately working pressure gauge.</li> <li>6. Machine to be use only by adequately trained operatives and aware on manufacturer's instruction in safe use of the machine.</li> <li>7. Ensure machine should be situated in stable surface and away from pedestrian access. As necessary barricade working area to prevent unnecessary access.</li> <li>8. Machine must be adequately inspected, tagged and pre-use check must be done ensuring machine is safe for operation. If found defects, must be reported immediately and restrict from service.</li> <li>9. Make sure that all electrical</li> </ol>	1	3	3	L

									<p>cables are connected to the machine correctly before you start the machine.</p> <p>10. Maintain machine with approved spare parts and fittings including electrical cable and socket and free from any damages.</p> <p>11. Must be PAT tested and colour coded prior to use on site and monthly check to be done by competent electrician and tagged ensuring safe to use.</p>					
52	<b>Concrete Coring/Cutting works</b>	<ul style="list-style-type: none"> <li>❖ Entanglement into rotating bit</li> <li>❖ Contact with faulty electrical components</li> <li>❖ Noise &amp; Vibration.</li> <li>❖ Generation of dust.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personal injury</li> <li>➤ Sprain on hand wrist and dislocation of hand wrist bones</li> <li>➤ Electrocution / electric shock.</li> <li>➤ Tinnitus / hearing loss</li> <li>➤ Eye irritation</li> </ul>	<p>General site workers</p> <ul style="list-style-type: none"> <li>• General site staff</li> <li>• Site visitors</li> </ul>	3	3	9	M	<ol style="list-style-type: none"> <li>1. Operators are not to wear loose clothing or gloves, or use rags or other materials, which could become entangled in moving parts</li> <li>2. Ensure that the core bit is the right type for the material to be drilled and should be free of damage.</li> <li>3. Thoroughly check the use of machine / accessories to confirm not counterfeit or reconditioned items have been sold as new.</li> <li>4. Core bit should be securely fitted with the machine prior to operate the machine.</li> <li>5. Ensure the depth of cut just projects through the underside of the material being cut.</li> <li>6. Disconnect before adjusting and fixing core bits on the machine.</li> <li>7. Never exert excessive force to the machine during drilling hard materials.</li> <li>8. Only trained person should</li> </ol>	1	3	3	L	ADOSH COP 35.0 Portable Power Tools

									<p>operate the machine.</p> <p>9. All electrical tools to be PAT tested and colour coded prior to use on site.</p> <p>10. Ensure user must aware on the equipment manufacturer's instruction.</p> <p>11. Maintain handheld power tools with approved spare parts and fittings including electrical cable and socket and free from any damages.</p> <p>12. Cables must be positioned to avoid accidental damage e.g. rotating bit, sharp edges and kept away from wet surfaces. Sludge from cutting must be remove regularly.</p> <p>13. Provision of sufficient water for suppression into the coring surface.</p> <p>14. Use safety goggles and dust mask for the task.</p> <p>15. Barricade the work area and instruct others not to see overhead to prevent fall of dust particles on eye</p>					
53	<b>Use of pneumatic airless spray machine</b>	<ul style="list-style-type: none"> <li>❖ Release of excessive pressure.</li> <li>❖ Caught on / entanglement with the rotating parts of the mixing drum.</li> <li>❖ Fall of the machine</li> <li>❖ Generation of static charges from flow of pressure during operation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personal injury e.g. hand / finger injury.</li> <li>➤ Crushing injury</li> <li>➤ Upper limb amputation</li> <li>➤ Fire / explosion</li> <li>➤ Serious personnel injuries</li> </ul>	<p>Site Workers</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	4	16	X	<p>1. Machine to be equipped with appropriately operational safety device such as safety valve air pressure regulator at the main pump of the machine including emergency stop button and rapture disc to prevent exceeding the allowable pressure into the system.</p> <p>2. Ensure fittings and hoses are conform with the maximum working pressure. Any sign of</p>	1	4	4	M	<p>ADOSH SF CoP 49.0 Compressed Gases &amp; Air</p> <p>ADOSH CoP 47.0 Machine Guarding</p>

								<p>damage or cracks should not be use.</p> <ol style="list-style-type: none"><li>3. Never hold your finger or hand in front of the gun and never reach into the spray</li><li>4. Never to attempt to point the spray gun towards yourself and others.</li><li>5. Check seal and connection from hoses to the spray gun ensuring free of leaks. If leaks occur, never try to seal leaks with your hand or binding the spot leak. Depressurized immediately the whole system and damage parts to be replaced.</li><li>6. When maintenance or cleaning is carried out, ensure machine must be fully depressurized and regulator must be closed.</li><li>7. Machine to be regularly check prior to use and tagged for safe operation.</li><li>8. Use only by adequately trained and competent person and ensures to comply with all manufacturer's instructions.</li><li>9. Area of operation must be barricaded and restricted only to authorized person.</li><li>10. When shifting the machine, ensure the machine must be depressurizes and disengage from any connection.</li><li>11. Secure machine to be positioned in a levelled surface away from leading edges.</li><li>12. All wheels must be locked with its brake lever by pressing/stepping down to</li></ol>					
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									<p>avoid involuntary movement during operation.</p> <p>13. Kept area with sufficient space to allow proper movement and placing of materials.</p> <p>14. Never left the machine unattended while on operation.</p> <p>15. Underneath must be fully barricaded.</p> <p>16. Use only conductive hoses compatible with the machine that corresponds with the maximum operating pressure of the system.</p> <p>17. Only trained user to operate the machine.</p> <p>18. Maintain the machine with approved spare parts and fittings.</p> <p>19. Machine to be equipped standard grounding wire and must suitably grounded prior to operation.</p>					
54	<b>Use of Pallet trolley</b>	<ul style="list-style-type: none"> <li>❖ Unit fall over person while shifting due to load unstable and toppling over</li> <li>❖ Load shift during transit and falling from rollers</li> </ul>	➤ Serious personnel injuries	<p>Site Workers</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitors</li> </ul>	3	3	9	M	<p>1. Check the size, volume and weight of the unit before shifting and ensure the numbers of pallet trolleys with more SWL are used.</p> <p>2. Select correct route before. Do route survey and identify onsite hazards and take necessary alternate safe route if there are any obstruction/trip &amp; trap holes. If possible, secure the load.</p> <p>3. Proper handling - Training operatives through tool box talks.</p> <p>4. Correct number of person to be engaged and trained for Holding</p>	1	3	3	L	<p>ADOSH SF CoP 14.0 Manual Handling &amp; Ergonomics</p>

									the unit while shifting and proper coordination while shifting to the foundation. 5. Stringent Supervision while the work is in progress. 6. Use safety gloves and other PPE's while shifting to avoid cut injuries from the sharp edges					
55	<b>General repair works / maintenance - AC</b>	❖ Contact with faulty electrical conductors ❖ Caught on moving parts ❖ Striking particles	➤ Electrocutation/ Electric shock ➤ Eye injury	Technician Office staff	3	3	9	M	1. Prior to commence repair or maintenance, ensure that AC system must be securely de-energized. 2. Only competent and authorized technician to engaged in maintenance work. 3. Only use suitable work equipment. 4. Never attempt to carry out repair with motor in operation. 5. Keep working area free from any personnel.	1	3	3	L	ADOSH SF CoP 15.0 Electrical Safety
56	<b>Road repair works</b>	❖ Crush by vehicle movement ❖ Tripping hazards	➤ Serious personnel injuries	Site workers Site staff Site visitors	3	3	9	M	1. Temporary physical hard barriers to be place when carrying out road repairs. 2. As necessary, road repairs must be done only during off working hours to minimize presence of vehicle movement. 3. Ensure no pedestrians or unnecessary movement in close proximity. 4. Traffic management plan to be adhered to and designated traffic routes used. 5. Flagman to be mobilized to divert vehicle movement until finally completed road repair works. 6. Only limited person to be	1	3	3	L	ADOSH SF CoP 44.0 Traffic Management & Logistics

									mobile on the road and ensure adequate supervision while repair in progress. 7. Temporary speed breaker to place prior to location of road repair to control vehicle movement.					
57	<b>Using Podium ladder</b>	<ul style="list-style-type: none"> <li>❖ Fall of person due to:</li> <li>❖ Overreaching/overloading</li> <li>❖ Improper positioning</li> <li>❖ Unsecured ladder</li> <li>❖ Damage ladder</li> <li>❖ Collapse of ladder</li> <li>❖ Fall of Materials</li> </ul>	➤ Personnel Injuries	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitors</li> </ul>	3	3	9	M	<ol style="list-style-type: none"> <li>1. The podium steps MUST be erected in accordance with the manufacturer's instructions. Once erected, check the podium steps to ensure all components, hooks and locking mechanisms fit and operate correctly.</li> <li>2. Check ALL components are free from damage for correct function and use.</li> <li>3. Always ensure podium ladders must situated in a firm level surface.</li> <li>4. Check SWL prior to use and ensure it must not overload. Only one person of the platform and never stack any materials on the platform. Ensure that the combined weight of person plus tools not exceed SWL which designed for such a load as recorded in the ladder manufacturer's instructions.</li> <li>5. Ladders must not be leant against podium steps or stood on the platform to gain extra height. Never stand on the frame to gain extra height.</li> <li>6. Avoid placing tools on platform. Ensure built-in tool holder affixed on the platform or use of tool belt/tool bag for only</li> </ol>	1	3	3	L	ADOSH SF CoP 37.0 Ladders

									<p>lightweight tools.</p> <p>7. Never carry tools and materials by hand when climbing ladders.</p> <p>8. Avoid overreaching while on platform.</p> <p>9. Ensure guardrail gate must be place and ensure it must be fully closed while working on platform.</p> <p>10. Where necessary, outriggers must be provided as per manufacturer's instruction to ensure stability of the ladder.</p> <p>11. people;</p> <p>12. Ladders should not be modified or used or any other purposes as designed.</p> <p>13. Ensure the use of slip resistant appropriate footwear when using ladders.</p> <p>14. Rungs MUST be clean before the ladder is used. Ensure rungs MUST be free of any contaminants e.g. grease or oil.</p> <p>15. Ensure no person on a ladder when it is being moved to a new work location.</p> <p>16. Never reach or stretch to either side or away from the ladder, except to hold a stable supporting structure.</p> <p>17. Workers using ladders MUST be adequately trained and competent.</p> <p>18. Ensure competent supervision to workers using podium ladder.</p>					
58	<b>Use of Mobile tower Scaffold</b>	❖ Scaffolding collapse	➤ Serious Personnel	Site workers • Site staff	4	3	12	M	<p>1. Avoid overloading materials on scaffold.</p> <p>2. Scaffold must position in a firm</p>	1	3	3	L	ADOSH SF CoP

		<ul style="list-style-type: none"> <li>❖ Toppling /overturned scaffold</li> <li>❖ Fall of materials / tools</li> <li>❖ Fall of person from scaffold</li> </ul>	Injuries	<ul style="list-style-type: none"> <li>• Site visitors</li> </ul>					<p>level surface keeping away from any leading edges, floor opening and potholes. Where it could not be avoided near leading edges, tower scaffold must be securely jacked into the slab.</p> <ol style="list-style-type: none"> <li>3. Height of mobile scaffold should not be greater than 3.5 times the minimum base dimension while inside the building and 3 times outside the building, unless specified by the manufacturer or supplier.</li> <li>4. Outrigger to be used wherever height of scaffold being erected. Outrigger is part of the tower scaffold not accessories.</li> <li>5. Ensure suitable locking pin has been securely intact between frame of scaffold.</li> <li>6. Tower scaffold must be erected, inspected and tagged by competent person prior to use. Any found defects on components must be onsite immediately.</li> <li>7. Ensure appropriate size and capacity castors should fitted to support the total mass of the dead and live loads of the mobile scaffold and castors should be clearly marked the working load limit.</li> <li>8. All castors shall be locked when being erected and during use.</li> <li>9. External and open area never move tower scaffold in windy condition.</li> <li>10. Ensure manufacture's instruction shall be followed</li> </ol>				<p>26.0 Scaffold ADOSH SF CoP 23.0 Working at Height</p>
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									<p>when erecting, use and dismantling mobile scaffold.</p> <p>11. Never mixed incompatible scaffold materials that may affect the integrity of the structure once erected.</p> <p>12. Never stacked excessive material on scaffold.</p> <p>13. Never drop materials from scaffold. use suitable hoisting equipment e.g. hoisting rope</p> <p>14. Hand tools to be tied using rope if required or use of tool pouch when accessing or working on scaffold.</p> <p>15. Never move scaffold with person on platform.</p> <p>16. Ensure complete guardrail (top rail and mid-rail) at standard height of on working platform including toe boards.</p> <p>17. Use full body harness and must be anchored into the scaffold frame not into the railings.</p> <p>18. Only engaged adequately trained and competent workers including the use of fall protection equipment.</p> <p>19. Ensure competent supervision at all times including the provision of adequate instruction through pre-start briefing and/or TBT</p>					
59	<b>Use of chain block</b>	<ul style="list-style-type: none"> <li>❖ Fall of load due to:</li> <li>❖ Failure of lifting equipment / anchorage points</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious Personal Injuries</li> </ul>	<ul style="list-style-type: none"> <li>Site workers</li> <li>• Site staff</li> <li>• Site visitors</li> </ul>	4	3	12	M	<ol style="list-style-type: none"> <li>1. Ensure suspension points and anchorages are adequate for the full imposed load.</li> <li>2. Where suspension points anchored to the structure,</li> </ol>	1	3	3	L	ADOSH SF CoP 34.0 Safe Use of Lifting Equipment &

		<ul style="list-style-type: none"> <li>❖ Overloading</li> <li>❖ Trapping hazard</li> </ul>					<p>ensure it must be securely bolted on the structure and pull out test to be done to ensure the integrity of installation.</p> <ol style="list-style-type: none"> <li>3. Lifting must be directly over the center of gravity so that the line of rigging is vertical.</li> <li>4. Prior to use check:</li> <li>5. - All moving parts for evidence of wear, damage or distortion.</li> <li>6. - Chain for deformity, nicks, chipped, cracked or damaged links and chain should not be twisted or stretch chain spring. When found defects, must be removed from service.</li> <li>7. Chain seats correctly into the chain wheel, with no "riding".</li> <li>8. -Operation of brake system or pawls to ensure correct operation.</li> <li>9. - Hooks for wear or distortion, and check operation of safety latches.</li> <li>10. - Operation of controls to ensure that unit shuts off when pendant control button is released.</li> <li>11. Check the travel path to ensure free movement of the load. Kept body parts away when rigging the load</li> <li>12. Chain block to be tested with 3rd party prior to use.</li> <li>13. SWL to be marked on chain block and ensure it will not be exceeded.</li> <li>14. Use the equipment only for the purpose for which it is designed.</li> </ol>				Lifting Accessories
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								<ol style="list-style-type: none"><li>15. Ensure load must be securely sited into installation area prior to unhook with the chain block.</li><li>16. Keep area of unnecessary movement.</li><li>17. Ensure supporting bracket must be rigidly bolted on the fixed structure.</li><li>18. Never attempt lifting operations unless you have been trained in the use of the equipment and slinging procedures.</li><li>19. Do not allow people to stand / pass under the lifting load.</li><li>20. Never left the load unattended while suspended unless in an emergency then ensure the area is cordoned off and kept clear.</li><li>21. Ensure safety latches must be securely engaged prior to start hoisting the transformer</li><li>22. Never attempt to push the load that could cause the load to swing. Where necessary, install tagline to control the load while hoisting.</li><li>23. Adopt safe slinging practices and follow the instructions of the safe use of the equipment. Never attempt to impose sudden or shock load.</li><li>24. Prior to lift load, try the block to ensure that it operates correctly and that the brake is effective.</li><li>25. Chain block must be place in adequate storage area when not in use</li></ol>					
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60	<b>Water tank filling works</b>	<ul style="list-style-type: none"> <li>❖ Struck / crush by reversing / movement of vehicle.</li> <li>❖ Fall of person accessing on top water tank</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> </ul>	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	3	12	M	<ol style="list-style-type: none"> <li>1. Persons not to stand behind machine that would obscured to the vision of the truck driver</li> <li>2. Banks man to keep observant and restrict any unnecessary movement in close proximity to the vehicle.</li> <li>3. Machine must have fitted with audible reversing alarm and amber light including mirrors use by the driver to oversee rear side of operation.</li> <li>4. Ensure fully boarded scaffold shall be provided a safe means of access on top of the water tank. Complete guardrails, toe board and suitable access ladder.</li> <li>5. Never allow workers out of the railing to access the opening of the water tank.</li> <li>6. Never climb on cross bracing of the scaffold.</li> <li>7. Scaffold systems shall be erected in accordance with the manufacturers guidelines and shall utilize only approved components and accessories.</li> <li>8. Erected by trained and competent operatives and inspected by competent scaffolding inspector prior to use. Ensure tag must be affixed at the access of the scaffold.</li> <li>9. Worker must be adequately trained and instructed in all safe work practices.</li> </ol>	1	3	3	L	ADOSH SF CoP 44.0 Traffic Management & Logistics  ADOSH SF CoP 23.0 Working at Height
61	<b>Water tank</b>	<ul style="list-style-type: none"> <li>❖ Fall of person into the tank</li> </ul>	Personal injury <ul style="list-style-type: none"> <li>• Asphyxiation</li> </ul>	Cleaning	3	4	12	H	<ol style="list-style-type: none"> <li>1. Suitable access must be erected such as scaffolding with secured ladder.</li> </ol>	1	4	4	M	

	<p><b>cleaning</b></p>	<ul style="list-style-type: none"> <li>❖ Slip hazard from sludge and algae</li> <li>❖ Atmospheric condition e.g. poor air ventilation, lack of oxygen level</li> <li>❖ Ingress of water supply</li> <li>❖ Ingestion &amp; skin absorption to cleaning agents</li> </ul>		<p>contractor operatives</p>			<ol style="list-style-type: none"> <li>2. Ensure landing platform –fully boarded must be set-up on top of the water tank with complete railing.</li> <li>3. Ladder access must be also provided inside the water tank.</li> <li>4. Must be inspected and tagged by competent scaffolding inspector.</li> <li>5. One at a time to access on top of water tank.</li> <li>6. Never jump into the tank.</li> <li>7. Wear suitable boots with slip resistant sole.</li> <li>8. Restrict unnecessary entry of other operatives/worker not involve.</li> <li>9. Clear instruction must be given through TBT/pre-start briefing/risk assessment communication and ensure constant supervision throughout the duration of the task.</li> <li>10. No lone working inside the tank.</li> <li>11. Clean boots of any residue of cleaning materials before accessing in and out through the ladder.</li> <li>12. Tank must thoroughly assess prior to enter – atmospheric testing. Ensure inside tank must be put into acceptable level include oxygen level.</li> <li>13. Purge fresh air using ventilating fan to enable appropriate breathing condition of the operatives prior to enter.</li> <li>14. Thereafter, frequent interval of atmospheric testing to be done.</li> <li>15. Where might be arise strong</li> </ol>				<p>ADOSH SF CoP 27.0 Confined Spaces</p>
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								<p>concentration of the chemicals, provide and use suitable respirator.</p> <ol style="list-style-type: none"><li>16. Operatives must be adequately instructed prior to enter.</li><li>17. No lone working inside the tank. Where necessary watchman must be stationed at the opening of the tank.</li><li>18. PTW to obtain to formalize a safe system of work.</li><li>19. Entry must be restricted to authorized person only.</li><li>20. Tank must be drain and ensure control valve must be securely shut off</li><li>21. Chemicals/cleaning agent used must be provided with safety data sheet and communicate all necessary information to the operatives.</li><li>22. COSHH assessment to communicated and ensure all precautionary measures has to be taken into consideration.</li><li>23. Protective clothing must be worn e.g. rubber gloves and boots and cover all long sleeves and ensure free of damage.</li><li>24. Contaminated clothing should not be used.</li><li>25. Thorough wash after cleaning to remove residue of sensitizing impurities of the cleaning agent that could cause irritant.</li><li>26. Use moisturizing cream after cleaning to replenish skin glands and its epidermis layer after exposure to the substance.</li><li>27. Any open wounds must be</li></ol>				
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									covered with clean gauze to prevent direct contact that immediately penetrate into the blood steam. 28. Clear instruction and information must be provided prior initiate the activity. 29. Monitor and supervise thought the duration of the activity.					
62	<b>Using of LASER Leveller</b>	❖ Striking laser beam	<ul style="list-style-type: none"> <li>➤ Eye &amp; skin damage</li> <li>➤ Skin irritation from battery liquid</li> <li>➤ Fire</li> </ul>	Site workers <ul style="list-style-type: none"> <li>• Site staff</li> <li>• Site visitors</li> </ul>	3	3	9	M	1. Do not direct the laser beam at persons and do not stare into the laser beam yourself. 2. Do not operate the measuring tool in explosive environments, such as in the presence of flammable liquids, gases or dusts. 3. Do not allow untrained operatives to use the laser measuring tool without supervision. 4. Avoid reflection of the laser beam on smooth surfaces such as windows or mirrors. 5. The measuring tool should be operated only by persons that are familiar with the handling of laser devices. 6. Do not open the battery pack and do not subject them to excessive mechanical stress. 7. Do not charge the batteries. 8. Do not solder the batteries into the tool. 9. Do not discharge the batteries by short circuiting as this may cause them to overheat. 10. Do not use damaged batteries. 11. Do not mix old and new batteries.	1	3	3	L	Manufacturer's recommendation

									<p>12. Do not mix batteries of different makes or types.</p> <p>13. Do not exposed batteries into excessive high temperature. Old batteries must be disposed considering as hazardous waste.</p> <p>14. Do not use the laser viewing glasses as safety goggles.</p> <p>15. Have the measuring tool repaired only through qualified specialists using original spare parts.</p> <p>16. The measuring tool is provided with a warning</p> <p>17. label in English and Arabic and other languages suitable to the workers</p> <p>18. Always set up the measuring tool in such a manner that the laser beams run far above or below eye level.</p> <p>19. Prior to initiate marking in a selected portion, mark the area in which the measuring tool is being used with suitable laser warning labels.</p> <p>20. Kept equipment away from damp or wet condition.</p>					
63	<b>Use of plate compactor (wacker plate)</b>	<ul style="list-style-type: none"> <li>❖ Manual handling</li> <li>❖ Excessive noise</li> <li>❖ Vibration</li> <li>❖ Crush by the machine</li> </ul>	<ul style="list-style-type: none"> <li>➤ Sprains &amp; stains</li> <li>➤ Other musculoskeletal disorders</li> <li>➤ Joint pain and stiffness in the hand and arm</li> <li>➤ Numbness, tingling and loss of dexterity in the tips of the finger;</li> </ul>	<p>Site Workers</p> <ul style="list-style-type: none"> <li>• Site Staff</li> </ul>	4	3	12	H	<p>1. Under any circumstances “NEVER LIFT MANUALLY” the machine during loading and unloading or shifting into the activity area. Use appropriate lifting equipment or ramp where it is shifted into the trench.</p> <p>2. Never attempt to move the machine unless it is operating.</p> <p>3. As necessary, low vibration</p>	1	3	3	L	ADOSH SF CoP 36.0 Plant & Equipment

			<ul style="list-style-type: none"> <li>➤ Nerves damaged in the hand.</li> <li>➤ Blanching or vibration induced white finger disease</li> <li>➤ Hearing disorders e.g. tinnitus, temporary / permanent threshold shift, NIHL</li> <li>➤ Feet crushing injury</li> </ul>						<p>features with the equipment shall be specified during the procurement phase.</p> <ol style="list-style-type: none"> <li>4. Ensure equipment must be regularly maintained to ensure vibration was kept to its designated level.</li> <li>5. Pre-use check on the machine must be done to ensure safe operational condition.</li> <li>6. Advise workers of the danger of vibration white finger and introduce necessary precautions including worker/job rotation to minimize the exposure.</li> <li>7. Ensuring that workers has been instructed through pre-start briefing/TBT on the risk associated on the process, the symptoms of the syndrome and the control measures that should be followed.</li> <li>8. Provision of hard-gripping gloves and ensure it has to be worn and ensure a constant supervision.</li> <li>9. Restrict unnecessary movement nearby activity area. Worker to ensure wearing appropriate safety footwear.</li> <li>10. Damaged equipment or where it induces excessive vibration should not be use. Immediately notified the supervisor</li> <li>11. Never allow untrained workers. No lone working.</li> <li>12. Never leave a machine running unattended. Machine to be de-energize if not in use.</li> <li>13. Check activity area, machine to</li> </ol>			
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									<p>be run on flat &amp; levelled surface and ensure free from any obstructions e.g. stones.</p> <p>14. Always comply with manufacturer's recommendation for safe use of the machine.</p> <p>15. Maintain good balance and good footing at all times during operation.</p> <p>16. Fuel container must be returned back into designated storage area away from ignition source.</p> <p>17. Refuelling to be done only in an open and well-ventilated area.</p>					
64	<b>Using asphalt / concrete cutting machine</b>	<ul style="list-style-type: none"> <li>❖ Hit by/caught on rotating blade</li> <li>❖ Incorrect disc fitted</li> <li>❖ Disc fitted incorrectly</li> <li>❖ Faulty / damaged disc fitted</li> <li>❖ Wrong disc fitted / used for purpose</li> <li>❖ Inexperienced or incompetent person</li> <li>❖ Projectiles / workpieces emitted</li> <li>❖ Tripping hazard</li> <li>❖ Manual handling</li> <li>❖ Dust</li> <li>❖ Contact with faulty electrical components</li> <li>❖ Noise</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personal injuries e.g. amputation</li> <li>➤ Electrocution / electric shock</li> <li>➤ Tinnitus / hearing loss</li> </ul>	<p>Site worker</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	3	12	M	<p>1. Machine guards must securely intact to protecting the rotating parts of the machine. Check blade guards before mounting, must be free of any damage. Under any circumstances "NEVER CUT WITHOUT USING THE BLADE GUARD". Check the maximum size of saw blade when starting base on manufacturer's recommendation.</p> <p>2. Only use blades recommended by the manufacturer. Never use a damaged or worn blade.</p> <p>3. Ensure blade must be securely tightened using the recommended spanner with the required tightening torque.</p> <p>4. A pre-use check to be done, any found defects must be reported immediately to the supervisor.</p> <p>5. When replacing and cleaning the blade, never remove the</p>	1	3	3	L	<p>ADOSH SF CoP 47.0 Machine Guarding</p> <p>ADOSH SF CoP 15.0 Electrical Safety</p> <p>ADOSH SF CoP 3.0 Occupational Noise</p> <p>3.1 Vibration</p>

								<p>blade guard without first shutting off the hydraulic unit and ensuring that the blade has finished rotating completely.</p> <ol style="list-style-type: none"><li>6. Clear area of operation from unnecessary and unauthorized movement of other personnel.</li><li>7. No lone working, make sure that there is always another person close at hand when you use the machines, so that you can call for help if emergency arises.</li><li>8. Always saw in a manner that permits easy access to the emergency stop.</li><li>9. Never leave the machine unsupervised with the engine running.</li><li>10. Clearly mark out all cuts to be made before you start sawing, plan these so they can be carried out without danger to persons or the machine.</li><li>11. Observe care when lifting/handling heavy parts during mounting, which implies the risk of pinch injuries or other injuries.</li><li>12. Remain concentrated and focused on the task.</li><li>13. Do not use the machine if it is not working properly. Never modify the machine. Repair to be done only by competent technician. Machine must be adequately maintained its operation condition.</li><li>14. Machine to be used only by an adequately trained and</li></ol>					
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									<p>competent person and always ensure adequate supervision.</p> <p>15. Make sure that all electrical cables are connected to the machine correctly before you start the machine.</p> <p>16. Never attempt to make repairs or changes to the machine. Any malfunction, must be done only by competent electrician.</p> <p>17. Machine must be kept away from water stagnated areas, highly moisture or damp condition.</p> <p>18. Ear protection should be worn. When excessive noise emitted both ear plug and ear muffs should be worn and restrict unnecessary / unauthorized entry near the activity area.</p> <p>19. Job rotation for the workers and ensure the use hard gripping gloves</p>					
65	<b>Using LPG cylinder with blow torch</b>	<ul style="list-style-type: none"> <li>❖ Gas emission / leak due to leaking cylinder, hoses or valves</li> <li>❖ Flashback</li> <li>❖ Tripping hazard</li> <li>❖ Contact with flaming torch</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fire or explosion</li> <li>➤ Burns</li> </ul>	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitors</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Proper storage facilities shall be provided. LPG's to be stored away from any flammable / combustible materials.</li> <li>2. Cylinder storage areas must be clearly identified and 'No Smoking' signs posted.</li> <li>3. Torch and hoses connection must be fitted with flash back arrestor.</li> <li>4. Hose must be free of damaged, cracks or deterioration, sign of burnt, cuts, etc. and ensure free of any contaminants e.g. oil and grease.</li> <li>5. Hose must be secured from</li> </ol>	1	4	4	M	ADOSH SF CoP 49.0 Compressed Gases & Air  ADOSH SF CoP 28.0 Hotwork Operation

									<p>leaks using standard safety clamp – makeshift tie wire is not allowed.</p> <ol style="list-style-type: none"><li>6. Check regulator and hose fittings prior to use – must be appropriately working and free of damage. Leaky or malfunctioning regulators will be replaced immediately.</li><li>7. Always ensure valve to be close when moving cylinders.</li><li>8. Kept away from other gases at least 3 meters away</li><li>9. Shifting of cylinder into the site must use appropriate cylinder trolley.</li><li>10. Never dropped or roll cylinder as compressed gas reacts violently when shaken.</li><li>11. Ensure regular inspection to LPG and accessories prior to use.</li><li>12. Use only a spark ignitor to light the gas.</li><li>13. Flashback arrestors and regulators shall be installed.</li><li>14. Never expose cylinder directly on sunlight to avoid increasing of pressure inside the tank.</li><li>15. LPG cylinders shall be always in upright position</li><li>16. Ensure the work area is well ventilated and free from combustibles.</li><li>17. Before connecting the cylinder, check the gas system for suitability. The process pressure should not be able to exceed the supply pressure to avoid back flow.</li></ol>					
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									<p>18. Tool box talk and pre-start briefing should be made prior to start work</p> <p>19. Ensure adequate supervision by competent supervisor</p> <p>20. Hoses will be laid in such a way not to pose any trip hazard.</p> <p>21. Obtain PTW from the authorized person prior to commence the activity and ensure all precautions must be observed.</p> <p>22. Area must be free from any combustible materials – at least 10 meters.</p> <p>23. Work activity shall be properly communicated to the workforce</p> <p>24. Switch off torch when not in use and close the supply from the LPG cylinder.</p> <p>25. When torch is not in use, it will be always place it on its support, with head aiming upwards.</p> <p>26. Hand gloves and appropriate minimum PPE's shall be worn.</p> <p>27. Ensure adequate supervision by competent supervisor.</p> <p>28. Watchman to mobilized and ensure no unauthorized access to the application area.</p>					
66	<b>Material Delivery &amp; Storage</b>	<ul style="list-style-type: none"> <li>❖ Falling of materials.</li> <li>❖ Collision of delivery trucks/pickups with men or materials.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Damage to property</li> <li>➤ Injuries, Cut Wound,</li> <li>➤ Bruise, Fracture,</li> <li>➤ Dislocation,</li> <li>➤ Abrasion, Sprain,</li> </ul>	Employee's visitors, personnel walking nearby	4	3	12	M	<p>1. Ensure that all operators and drivers are inducted.</p> <p>2. Ensure that all pickup drivers from the company are informed about the project safety requirements prior to the delivery of materials.</p> <p>3. Ensure that the road access</p>	1	3	3	L	ADOSH- COP 36.0 for Plant and Equipment, COP 21.0 for permit to work system,

		<ul style="list-style-type: none"> <li>❖ Slips, trips, and falls.</li> <li>❖ Pickup trucks toppling over.</li> <li>❖ Damage to existing utilities, such as streetlights.</li> <li>❖ Unsafe storage of materials.</li> <li>❖ Unsafe unloading of materials.</li> <li>❖ Deliveries during nighttime</li> </ul>	<ul style="list-style-type: none"> <li>➤ Strain.</li> <li>➤ Slips, trips, and falls Can lead to injuries and lost work time</li> <li>➤ Pickup trucks toppling over Can cause serious accidents</li> <li>➤ Damage to existing utilities (e.g., streetlights Can disrupt services and lead to repair costs</li> </ul>				<p>from the site entrance to the storage area is properly leveled, maintained, and compacted.</p> <ol style="list-style-type: none"> <li>4. Ensure that all drivers and vehicles comply with the safety requirements.</li> <li>5. Ensure that drivers have adequate PPE.</li> <li>6. Ensure that drivers report to site office with documents.</li> <li>7. Ensure they follow site rules, driving speed limits.</li> <li>8. Ensure that they are guided by trained banksmen towards the safe storage zone.</li> <li>9. Ensure that main Contractor provides a safe and clear vehicle access route for delivery trucks and pickups.</li> <li>10. Ensure that adequate lighting is provided if the delivery is done atnight.</li> <li>11. Ensure that access ways are demarcated with cones and warning tape to prevent vehicles from going too close to the edges.</li> <li>12. Ensure that pickup trucks have reverse alarms and beacon lights.</li> <li>13. Ensure that a safe distance is maintained between the delivery access way and the pedestrian way.</li> <li>14. Follow (section 3 manual handling &amp; Cop 14.0 Manual Handling) for safe handling of materials manually.</li> <li>15. No unauthorized personnel should enter the storage area</li> </ol>			<p>Cop 14.0 for Manual Handling, COP 34.0 safe Mechanical Lifting , COP 22.0-Barricading of Hazards , COP 44.0 Traffic Management and Logistics</p>
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									while materials are being unloaded. 16. Training must be conducted for person involved in offloading of materials.					
67	<b>Use of Portable Power Tools</b>	<ul style="list-style-type: none"> <li>❖ Electrical,</li> <li>❖ Ejected components,</li> <li>❖ Sharp edges,</li> <li>❖ No PPE,</li> <li>❖ Sparks/fire/burn/fumes</li> <li>❖ Falling of material,</li> <li>❖ Flying particles,</li> <li>❖ rotating part</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electrocutation, serious injury, death.</li> <li>➤ Bruises, fractures, or Can cause burns,</li> <li>➤ fires, or breathing problems</li> <li>➤ Eye Injuries, Face injuries</li> </ul>	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitors</li> </ul>	4	3	12	M	<ol style="list-style-type: none"> <li>1. Ensure adequate lighting in work area.</li> <li>2. Ensure proper plugin &amp; avoid power overload.</li> <li>3. Power Tools shall be used by only competent operators.</li> <li>4. Site supervisor shall make sure that the operator is trained to use the Power Tools.</li> <li>5. All Power Tools shall be route throughout the portable DB which has installed safety (RCD-residualcurrent device) with the rating of 30ma.</li> <li>6. Trailing cable should not be in the path of other workers.</li> <li>7. Plugs and sockets should be water resistant and color coded.</li> <li>8. Grinders must have the Deadman Switch and other components such as Safety Guard on Disk, Handle and industrial plug for power connection.</li> <li>9. Keep Hands and fingers away from the Moving Parts of Power Tools.</li> <li>10. Ensure the power tools are not plugged in when not in use.</li> <li>11. Never pull Electrical Equipment from the cable other than then plug.</li> <li>12. Do not use electrical equipment with joint/ patched cables.</li> </ol>	1	3	3	L	ADOSH- COP 15.0 -Electrical Safety requirements CoP 35 - Portable Power Tools. and Cop-2.0 Personal Protective Equipment

									<p>13. Tools should be either Earthed or Double-insulated.</p> <p>14. If adjustments or changes need To be made, tools should be disconnected from the mains supply.</p> <p>15. Use the safety Ear Plugs for Noise reduction</p> <p>16. Electrical equipment will be inspected and approved by third party ADM approved.</p> <p>17. Warning signs are to be used to warn of potentially hazardous electrical equipment.</p> <p>18. Ensure PAT testing should be carried out for power tools at regular intervals as per legal requirements.</p> <p>19. Ensure the work area is dry.</p> <p>20. Ensure fire extinguisher is nearby.</p> <p>21. Ensure adequate supervision.</p> <p>22. PPE as recommended in operators manual must be issued and used during operation. (i.e., Hand gloves,</p> <p>23. Hard hats, Dust masks, safety glasses, face shield as appropriate),</p> <p>24. Pre task briefing should be provided to workers prior to the start of work.</p> <p>25. Close supervision by foreman in charge</p>					
69	<b>Work Near or Under Overhead Power Lines</b>	<ul style="list-style-type: none"> <li>❖ Contact with electricity or gas supplies</li> <li>❖ Flooding from</li> </ul>	<ul style="list-style-type: none"> <li>➤ Electric Shocks</li> <li>➤ Property damage</li> <li>➤ Serious injuries</li> </ul>	<p>Site worker</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	4	16	H	<p>1. All work to be planned in advance, taking account of the above.</p> <p>2. Full details of underground services will be obtained in</p>	1	4	4	M	ADOSH SF CoP 15.0 Electrical Safety

		<ul style="list-style-type: none"> <li>❖ water services</li> <li>❖ Contact with sewage</li> <li>❖ Explosion or asphyxia from gas leak</li> </ul>							<ul style="list-style-type: none"> <li>advance from the relevant authority, including</li> <li>3. Television communication Relay Companies and private property owners.</li> <li>4. Plans and cable location equipment will be available before work start.</li> <li>5. Approved method statement must be in place prior to start the work activity</li> <li>6. Ensure Job safety analysis (JSA) is completed</li> <li>7. Plans will not be assumed to be accurate, and location devices will be used in addition. Trial holes will be dug, using hand digging to confirm locations, at minimum 0.5 Meters from known services, taking account of physical indications such as junction boxes and manholes.</li> <li>8. The lines of service will be marked, using paint, wooden pegs, etc.</li> <li>9. At all times a C.A.T scan is required to identify all unknown services.</li> <li>10. All services will be assumed to be live until proven otherwise.</li> <li>11. Services crossing excavations will be supported. Services in concrete will be isolated before breaking</li> </ul>					
70	<b>Working on or near live Road – survey works</b>	<ul style="list-style-type: none"> <li>❖ Crush by / hit by vehicular traffic movement.</li> <li>❖ Exposure to hot weather</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personal Injuries.</li> <li>➤ Heat stress and other heat related ill-nesses</li> </ul>	Who ever working near the road	4	3	12	H	<ul style="list-style-type: none"> <li>1. Where necessary, permit to be obtain from concern authority prior to commence any activity.</li> <li>2. Mobilized trained and competent traffic marshal/flagman to monitor</li> </ul>	1	3	3	L	ADOSH SF CoP 33.0 Working on or Near Live Road

		condition							<p>and safely guide vehicular traffic through, around and past the activity area.</p> <ol style="list-style-type: none"><li>3. Working along the road, always ensure a safe distance within the path of vehicular traffic.</li><li>4. Operatives must always aware on the approaching vehicles along the road. Always observe road conditions with the vehicular movement. Avoid unnecessary road crossing. Operatives must be within the predetermined activity area only.</li><li>5. Where necessary, traffic control devices must be provided (e.g. warning signs and barriers/cones) as per Police/DOT requirements. Operatives should not be positioned any part of the road without any protective barriers.</li><li>6. Must ensure, a highly reflective vest must be worn by operatives all the time while at work.</li><li>7. Ensure activity must be adequately planned and ensure all operatives must observed all collective measures required for the activity. Assess the activity area with the traffic movement prior to mobilize.</li><li>8. Operatives must be trained and fully brief through TBT prior to mobilize.</li><li>9. In case of adverse weather condition that effects visibility such as fog, flashing lamps must</li></ol>			
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									<p>be provided in an appropriate location including a baton lamp to be used by the flagman.</p> <p>10. Ensure operatives have sufficient cold drinking water at work area with their own individual thermos. ORS/lemon to add in their drinks to replenish loss of body fluids due to sweat.</p> <p>11. During summer period, aware on summer work timing as per site requirements.</p> <p>12. Provide adequate rest recovery period for the workers carrying out heavy manual handling activities of surveying equipment.</p> <p>13. As necessary perform job rotation to the workers. Must aware on TWL (thermal work limit) and its necessary precautions.</p> <p>14. Ensure operatives have access to a shaded area adjacent to the activity.</p> <p>15. Adequate PPE and proper clothing during when working under high temperature e. g. lightweight, cotton and light coloured.</p>					
71	<b>Use of cartridge - operated tool</b>	<ul style="list-style-type: none"> <li>❖ Use of damaged or defective tools</li> <li>❖ Issuance to use by incompetent worker</li> <li>❖ Loss of tools or cartridges.</li> <li>❖ Improper</li> </ul>	➤ Personnel Injuries	<p>Site Workers</p> <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	3	4	12	H	<p>1. Issue of cartridge tools and cartridges must be strictly controlled, issued only to authorized personnel. Always remain in position until safe return to the store, where necessary kept under lock.</p> <p>2. Make sure that the issued tool is</p> <p>3. Make sure that the issued tool is</p>	1	4	4	M	OSHAD SF CoP 35.0 Portable Power Tools

		handling resulting to accidental firing Gun going off • Improper loading/loading wrong cartridge						in good condition			
								4. Pre-use checks to be done by a competent person			
								5. Cartridge tools must be dismantled and examined for defects by a competent person every seven day and taken out of service if any defects are found. Record must be maintained.			
								6. Suspect or faulty equipment shall be taken out of use, labelled 'DO NOT USE' and kept secure until examined by a competent person.			
								7. Always unload the gun before transporting it from one place to another			
								8. Carry the tool in the carry case provided by manufacturer			
								9. Cartridges should be retained in their packaging, and should not be carried loose.			
								10. When not in use cartridge tools shall be locked in a safe and controlled place and shall never be left unattended.			
								11. Pre-use checks to be done by a competent person			
								12. Cartridge tools must be dismantled and examined for defects by a competent person every seven day and taken out of service if any defects are found. Record must be maintained.			
								13. Suspect or faulty equipment shall be taken out of use, labeled 'DO NOT USE' and kept secure until examined by a			

									<p>competent person.</p> <p>14. Any problems with cartridge tools or cartridges must be reported and return to the store.</p> <p>15. All workers using Cartridge operated tools must be properly trained / qualified.</p> <p>16. Before using the tool, the worker should inspect it to determine that it is clean</p> <p>17. Make sure that all moving parts operate freely, and that the barrel is free from obstructions.</p> <p>18. Regular maintenance to be undertaken only by a competent person as per manufacturer's instructions</p> <p>19. The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.</p> <p>20. Load cartridge and nails as per manufacturers recommendations</p> <p>21. Select the correct power cartridge according to the surface type &amp; verify the surface before firing.</p> <p>22. Wear proper PPE.</p>					
72	<b>Use of cartridge - operated tool</b>	<ul style="list-style-type: none"> <li>❖ Nail/stud shooting through target, hitting workers on the other side</li> <li>❖ Flying particles / ricocheting nails</li> </ul>	➤ Serious Personnel Injuries	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	3	4	12	H	<ol style="list-style-type: none"> <li>1. Choose correct power cartridge; NEVER shoot through target with workers behind it.</li> <li>2. Give a warning prior to shooting such as "SHOT"</li> <li>3. Make sure that the all guards &amp; muzzle fittings are in place to</li> </ol>	1	4	4	M	OSHAD SF CoP 35.0 Portable Power Tools

		<ul style="list-style-type: none"> <li>❖ Not securing the tool against the surface</li> <li>❖ Tool kick back (recoil)</li> <li>❖ Cartridges left lying around being struck and going off.</li> <li>❖ Misfired cartridges causing explosion.</li> <li>❖ Horseplay</li> <li>❖ Fire hazard when tool is used in combustible atmosphere</li> </ul>					<p>prevent any flying objects</p> <ol style="list-style-type: none"> <li>4. Press the gun firmly against the surface at a right angle (90°) before firing</li> <li>5. Ensure that the cartridge power is suitable for the material on which the tool is being used</li> <li>6. Use the manufacturer manual to determine which type of cartridge is to be used for different materials</li> <li>7. Hands should be kept clear of the barrel end.</li> <li>8. Brace yourself securely while using cartridge operated tools on a ladder or at height</li> <li>9. Ensure proper housekeeping in the area &amp; remove all fired/misfired cartridges from the workplace &amp; return back to the store</li> <li>10. Do not reuse misfired cartridges. Misfired cartridges must be removed from site immediately</li> <li>11. The misfired cartridge should be put in water to prevent explosion.</li> <li>12. Never point a tool towards anyone when it is loaded.</li> <li>13. These tools should not be used in an explosive or flammable atmosphere.</li> <li>14. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.</li> <li>15. • Always ensure issue cartridge tool and cartridge to trained, competent and authorized</li> </ol>			
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									person					
73	<b>Use of electrically powered Jackhammer</b>	<ul style="list-style-type: none"> <li>❖ Caught on / entanglement with moving parts / pinch point of the machine</li> <li>❖ Cutting / stabbing / puncturing</li> <li>❖ • Abrasion</li> <li>❖ Vibration</li> <li>❖ Noise</li> <li>❖ Dust</li> <li>❖ Contact with faulty electrical components</li> <li>❖ Slips trips &amp; Falls</li> </ul>	<ul style="list-style-type: none"> <li>➤ Personnel injuries</li> <li>➤ White-finger disease / hand-arm vibration syndrome.</li> <li>➤ Tinnitus / hearing loss.</li> <li>➤ Burns</li> <li>➤ Electrocutation / electric shock</li> </ul>	Site Workers • Site Staff • Site Visitor	3	4	12	H	<ol style="list-style-type: none"> <li>1. Isolate activity area for at least 10meters by the use warning tapes and signage.</li> <li>2. Provide standard protective glass, where necessary use face shield.</li> <li>3. Ensure machine must be fitted with shock mounted handles to reduce vibration and fatigue.</li> <li>4. Job rotation for the workers allowing adequate rest / multiple breaks</li> <li>5. Provision and use of heavy duty hard gripping gloves to absorb vibration.</li> <li>6. Avoid prolong use and operation of the machine.</li> <li>7. If feel numbness and inability to feel temperature, stop using the tool.</li> <li>8. Ear protection should be worn. When excessive noise emitted both ear plug, and ear muffs should be worn and restrict unnecessary / unauthorized entry near the activity area.</li> <li>9. Keeping away unnecessary moving for at least 10 meters around activity area.</li> <li>10. Job rotation for the workers allowing adequate rest brakes.</li> <li>11. Do not touch during or immediately after operation as the steel becomes very hot during operation.</li> <li>12. All electrical tools to be PAT tested and colour coded prior to use on site.</li> <li>13. Disconnect the machine from</li> </ol>	1	4	4	M	ADOSH SF CoP 35.0 Portable Power Tools  ADOSH SF CoP 15.0 Electrical Safety  ADOSH SF CoP 3.1 Vibration ADOSH SF CoP 3.0 Occupational Noise

									electrical supply before changing any parts or accessories or servicing. 14. Immediately removed waste materials around the activity area to prevent accumulation. 15. Cables must be routed away from pedestrian movements. 16. Extra precautions must be taken in newly cut surfaces that was unlevelled with the concrete surface				
74	<b>Use of threading machine</b>	<ul style="list-style-type: none"> <li>❖ Entanglement of body parts / dresses in the rotating part of machine.</li> <li>❖ Fall/tipping over of the machine.</li> <li>❖ Use of damaged / substandard tool and accessories.</li> <li>❖ Faulty electrical connection</li> </ul>	<ul style="list-style-type: none"> <li>➤ Fractures/amputations/cut injures</li> <li>➤ Electrocutation / Electric shock</li> <li>➤ Serious Personnel Injuries</li> </ul>	<ul style="list-style-type: none"> <li>❖ Site Workers</li> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Ensure covers in place. Do not operate the machine with covers removed.</li> <li>2. Do not wear loose gloves or loose clothing or jewellery. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe.</li> <li>3. Make sure switch is in the OFF position before plugging power cord or when using nipple chuck wrench.</li> <li>4. Keep hands away from rotating pipe and fittings.</li> <li>5. Stop machine when screwing fittings on pipe or wiping thread.</li> <li>6. Machine is made to thread and cut pipe or bolt. Follow instructions in Operator's Manual on machine uses.</li> <li>7. Restrict unnecessary movement around the machine.</li> <li>8. Ensure sufficient working space to allow free movement of the operator including positioning of pipe work piece and provision of standard lighting.</li> </ol>	1	3	3	L

								<ul style="list-style-type: none"><li>9. Ensure the machine in complete stop before making any adjustment.</li><li>10. Secure machine to bench or rigid stand to keep the machine from tipping over.</li><li>11. Support long heavy pipe with pipe supports to prevent tipping of the machine.</li><li>12. Kept area with sufficient space to allow proper movement and placing of tools and materials.</li><li>13. Machine must be only use by foot switch and ensure it is not broken.</li><li>14. Lock foot switch when not in use to avoid inadvertent starting.</li><li>15. Operate machine from switch side only. Do not block or disconnect foot switch.</li><li>16. Make sure switch is in the OFF position before plugging power cord or when using nipple chuck wrench.</li><li>17. Machine is subject to PAT testing by OME competent electrician and ensure routine pre-use check by the user.</li><li>18. Ensure machine must be connected or routed to RCD protective system.</li><li>19. Kept tools and materials away from threading area.</li><li>20. Provide bucket to catch swarf materials underneath threading area.</li><li>21. Kept area with standard lighting arrangement.</li><li>22. Restrict unnecessary access /</li></ul>								
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									entry.					
75	<b>Pressure testing - hydrostatic</b>	<ul style="list-style-type: none"> <li>❖ Over pressurization causing failure of fittings, bends, end caps and weld joints</li> <li>❖ • Flooding during pressure testing due to leaks</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> </ul>	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	4	4	16	X	<ol style="list-style-type: none"> <li>1. Ensure the construction and materials must rate as per relevant standard requirements to ensure maximum protection.</li> <li>2. Pressure test will be performed under the direct supervision of a competent engineer.</li> <li>3. The responsible Competent Engineer must identify the maximum test pressure to be used as determined by the specific network or systems pressure testing procedure, method statement and design drawings.</li> <li>4. All members of the pressure testing team must be trained in the pressure testing procedure and trained employees will receive a red coloured identity card for identification to indicate that they are authorized to conduct pressure testing.</li> <li>5. All the workmen engaged in pressure testing must be briefed on the hazards, precautions and emergency procedures prior to the testing starting and risk assessment must be adequately communicated and recorded.</li> <li>5. Inspect all connected fittings and devices on the system or network to be pressure tested to ensure that they have been correctly installed and that they are rated for the maximum test pressure. Refer to approved design drawings and signed off</li> </ol>	1	4	4	M	ADOSH SF CoP 21.0 PTW System



									cancelled. A new permit to work must be obtained after repair work has been completed.					
									15. Emergency response team available during pressure testing / 24 hours.					
76	<b>Depressurize / draining system or network</b>	❖ Flooding during draining due to inadequate facilities / tanks	➤ Serious personnel injuries	Site Workers • Site Staff • Site Visitor	3	4	12	H	<ol style="list-style-type: none"> <li>1. Open air release valve before draining system or network.</li> <li>2. Supervisor to verify air release valve is opened before opening draining valve to system or network.</li> <li>3. Where lines have to be drained sufficient provision is made to contain drained water from system.</li> <li>4. Emergency response teams available during pressure testing / 24 hours.</li> <li>5. Dispose of water where directed to main sewer ensuring all pipe/hose connection were adequately secured.</li> <li>6. Remove warning tags and barricades after the completion of the hydrostatic pressure testing and close-out the Permit to Work.</li> </ol>	1	4	4	M	ADOSH SF CoP 21.0 PTW System
77	<b>Pressure testing - Pneumatic</b>	❖ Bursting of pipe due to high pressure	➤ Serious personnel injuries	Site Workers • Site Staff • Site Visitor	4	4	16	X	<ol style="list-style-type: none"> <li>1. Provide pressure relief devices which could withstands max set pressure at 110 % of the test pressure.</li> <li>2. Ensure the setting points of the pressure relief device is shall not be greater than test Pressure + lesser than 10% of the test pressure.</li> <li>3. Testing area MUST be securely demarcated and restricted with</li> </ol>	1	4	4	M	ADOSH SF CoP 21.0 PTW System

								<p>safe distance. Sign to be posted "DANGER – HIGH PRESSURE TESTING IN PROGRESS".</p> <ol style="list-style-type: none"><li>4. Physical barriers to be provided to restrict unauthorized entry to the testing area. Where necessary, watchman to be mobilized.</li><li>5. Extra precaution MUST be taken to prevent or minimize the possibility of brittle failure of the test pipes.</li><li>6. Prior to commence pressure test, pre-inspection.</li><li>7. MUST be carried out to check connections to verify proper assembly and tightness, positioning of valves, overpressure protection and control of the test.</li><li>8. During testing, gradually apply pressure and frequently check components for any possible leaks.</li><li>9. If leaks are identified, the system MUST be de-pressured, and repairs made prior to re-commence.</li><li>10. Isolation work permit (LOTO) to be obtain prior to commence pressure testing.</li><li>11. Ensure all workers are authorized, trained &amp; competent for the task.</li><li>12. Check affected utilities prior to testing and ensure it MUST be adequately protected.</li><li>13. Notify affected individuals regarding isolation of equipment's &amp; testing.</li></ol>				
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									<p>14. Ensure testing instruments have valid calibration certificates.</p> <p>15. Pressure test are MUST be adequately illuminated.</p> <p>16. Provide the watch man to prevent the unauthorized entry in work location.</p> <p>17. Ensure work will be going on under the full supervision &amp; must be following SSOW during the work.</p> <p>18. Ensure rotating parts of pressure pump should be covered.</p>					
78	<b>Use of Knife / Hand cutter</b>	❖ Misuse of Knife	➤ Personal injury	Site Workers <ul style="list-style-type: none"> <li>• Site Staff</li> <li>• Site Visitor</li> </ul>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Always ensure that blades are properly seated in knives and that knives are properly closed and/or fastened together before use. Check for signs of wear at suitable intervals</li> <li>2. Do not overfill blade storage chamber</li> <li>3. Never leave a knife unattended with the blade exposed</li> <li>4. Always use sharp blades</li> <li>5. Keep the free hand away from the line of the cut. When making cuts on a surface below, stand or kneel to one side of the line of cut.</li> <li>6. Always pull the knife toward the body when making a cut on a flat surface.</li> <li>7. When using a straight edge to guide a cut, either clamp it down or keep the free hand well away from the cutting path of the knife. The straight edge should be thick enough to prevent the knife from “riding</li> </ol>	1	3	3	L	Manufacturer's Recommendation

									up” over the edge. 8. Always use the right knife for the job 9. Retractable blade knives should be retracted fully and put into a safety holster 10. Fixed blade knives should be put into a safety holster 11. Snap blade knives are only to be used for light to medium applications. Blades should be disposed of properly					
79	<b>Maintenance, repair and fitting works to machinery</b>	<ul style="list-style-type: none"> <li>❖ Overturning due to excessive speed, bad ground, sudden braking &amp; operating on slopes</li> <li>❖ Entrapment, entanglement in machinery parts or body of machine.</li> <li>❖ Collapse of raised body, machinery or machinery parts.</li> <li>❖ Slips/ falls when climbing into or out of a cab</li> <li>❖ Heat, noise, vibration, high pressure fluid, electrical hazards from power transmission</li> <li>❖ Poor visibility from operating position</li> <li>❖ Contact with overhead wires when tipping</li> <li>❖ Unauthorised use</li> <li>❖ Poor visibility in hours of darkness</li> <li>❖ Working outside</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serious personnel injuries</li> <li>➤ Hearing disorder</li> <li>➤ Electric shock</li> </ul>	Site Workers • Site Staff • Site Visitor	3	4	12	H	<ol style="list-style-type: none"> <li>1. All fitters, mechanics and plant repair operatives to report to site security and site manager before entry to site, or conducting any works on site, every time on arrival to site.</li> <li>2. Employers must have in place suitable and sufficient inspection regimes and competent persons for inspections and ensure they have the requisite training and experience.</li> <li>3. Employers must provide information and instruction on the Safe Method of working. Where such information is not immediately available, then it should be requested from the hirer/supplier. Otherwise the plant department should be consulted.</li> <li>4. All company owned plant and equipment is maintained by plant department fitters to a planned schedule in accordance with plant department</li> </ol>	1	4	4	M	ADOSH SF CoP 36.0 Plant & Equipment

		<p>site hours</p> <ul style="list-style-type: none"> <li>❖ Lack of Supervision</li> <li>❖ Lone working</li> <li>❖ Untrained operatives</li> <li>❖ Exhaust fumes when used in confined area</li> </ul>						<p>procedures.</p> <ol style="list-style-type: none"> <li>5. A prestart briefing must be done by all fitters, mechanics, plant repair operatives, and plant operators prior to each and every task and be communicated and agreed by all affected parties.</li> <li>6. Only) trained, certified and authorised operators to operate plant, machinery and equipment.</li> <li>7. Drivers are not permitted to operate mobile phones when operating plant, machinery or equipment.</li> <li>8. A Traffic Management Plan must be developed, communicate and agreed for all works, to prevent accidents with mobile plant, other site users and pedestrians.</li> <li>9. High visibility vest, helmet, safety boots, glasses and gloves to be worn when working on machinery, plant and equipment.</li> <li>10. Dumpers to be fitted with a device to prevent accidental movement of Dumpers while body is it tipped position.</li> <li>11. Guards to moving parts must not be removed by law.</li> <li>12. All Plant and Machinery must be fitted with devices which provide roll-over protection.</li> <li>13. All Plant and machinery must be fitted with a seat harness which must be worn by driver.</li> <li>14. Consideration should be given</li> </ol>			
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								<p>to open edge safety protection where required {Safety banks and barriers}, “goal posts”; indicators for overhead cables.</p> <ol style="list-style-type: none"><li>15. Pedestrians must be segregated from haul roads and loading/unloading areas as far as is possible.</li><li>16. One-way systems should be adopted where possible</li><li>17. Red bar at back of skip to be fixed securely in place at all times, prior to carrying out any work beneath or in the vicinity of the raised skip, to prevent a collapse of the raised skip.</li><li>18. Steps and Platforms must be cleaned to provide safe footing, and prevent slips, trip and falls.</li><li>19. All Plant, Machinery and Equipment, must be made safe before any works are carried out.</li><li>20. No work is allowed on site, outside of the Site’s official working hours.</li><li>21. Working in hours of darkness is to be avoided, where this is not possible; suitable lighting must be provided where visibility is reduced because of darkness, whether due to environmental conditions or restricted space.</li><li>22. Only work in well ventilated areas.</li><li>23. Lone working is forbidden on site. Do not work alone</li></ol>				
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80	Use of pesticides for pest control	<ul style="list-style-type: none"> <li>❖ Physical &amp; Chemical hazards</li> <li>❖ (Inhalation, Ingestion)</li> <li>❖ Environmental hazards.</li> <li>❖ Insecticide contact &amp; Inhalation</li> <li>❖ Hose entanglement.</li> <li>❖ Burst hose, chemical splash</li> </ul>	<ul style="list-style-type: none"> <li>❖ Chronic respiratory diseases.</li> <li>❖ Irritant eyes &amp; Skin.</li> <li>❖ Pyrethroids due to ingestion.</li> <li>❖ Drowsiness, Headache &amp; Dizziness due to inhalation.</li> </ul>	Operatives Involve in work	3	4	12	H	<ol style="list-style-type: none"> <li>1. Follow safe method for handling chemicals.</li> <li>2. Approved MSRA Should be briefed to the execution team prior to start the work.</li> <li>3. Ensure competent person is assigned for carrying out the</li> <li>4. Avoid contacting with skin cuts and wounds.</li> <li>5. Clean hands with soaps after completion of work and before taking of food.</li> <li>6. Never do any first aid without first aider assistance.</li> <li>7. Display MSDS at material storage area.</li> <li>8. Restrict unauthorized person's entry to the work place.</li> <li>9. Tool box talks prior to the activity.</li> <li>10. Appropriate PPE's should be worn while performing the task.</li> <li>11. Area were chemical mixing should be on a specified location.</li> <li>12. Only trained technicians shall conduct the mixing of insecticide.</li> <li>13. Person in charge shall demonstrate. knowledge of pesticide label and Material Safety Data Sheet prior to mixing of chemicals.</li> <li>14. Make sure that the hose is properly laid and spread along the area to give proper of solution inside.</li> <li>15. Inspect hose before use, use approved chemical hoses, face</li> </ol>	1	4	4	M	<p>ADOSH SF -CoP 1.0 - Hazardous Materials CoP 2.0 – Personal Protective Equipment</p> <p>ADOSH-SF CoP 14.0 – Manual Handling and Ergonomics,</p>
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									shield. 16. Skilled and Competent persons to do the task. 17. The technician should control the pressure to prevent those explosion and chemical spillage. 18. Make sure that the pressure machine is well conditioned at all times prior to usage. 19. Skips/bins for collection and segregation of waste and debris must be provided in the site. 20. Waste & debris to be removed from the site to designated disposal area					
81	<b>Arc welding works</b>	<ul style="list-style-type: none"> <li>❖ Striking Molten particles</li> <li>❖ Fumes</li> <li>❖ Radiation</li> <li>❖ • Tripping hazard</li> <li>❖ Contact with faulty electrical components</li> </ul>	<ul style="list-style-type: none"> <li>➤ Burn injury</li> <li>➤ Fire</li> <li>➤ Electrocutation electric shock</li> </ul>	Site Workers • Site Staff • Site Visitors	4	4	16	X	<ol style="list-style-type: none"> <li>1. Obtain PTW from the authorized person prior to commence the activity and ensure all precautions must be observed.</li> <li>2. Area must be free from any combustible materials – at least 10 meters.</li> <li>3. Welding works must be in well-ventilated areas. Where necessary, dilution ventilation to be arranged to disperse contaminants or use of exhaust ventilation system.</li> <li>4. Use of welding screen must be provided to prevent arc and striking molten particles coming in contact to nearby activities.</li> <li>5. Isolate the area to restrict unnecessary access, relevant signage to be posted.</li> <li>6. Ensure the provision of trained watchman until activity will be</li> </ol>	1	4	4	M	<p>ADOSH SF CoP 28.0 Hotwork Operation</p> <p>ADOSH SF CoP 15.0 Electrical Safety</p>

								<p>completed.</p> <ol style="list-style-type: none"><li>7. Only 3rd party certified welder to perform the welding works.</li><li>8. Welders and helpers to use leather hand gloves.</li><li>9. Welders to use PPE including welding shield of shade 11 DIN, welders hand gloves, apron and safety helmet/coverall.</li><li>10. Suitable fire extinguisher must be made available in the welding area. In addition, bucket of water to be provided.</li><li>11. Use of appropriate respirator against fumes (use N95 type of respiratory filter / masks). Welder must position away from welding fumes.</li><li>12. Work area must return in safe condition once hot work is completed and ensure PTW must signed off by the authorize person.</li><li>13. Only adequately trained welder and watchman ensuring that they are aware on the following:</li><li>14. - Exposure of fumes and radiation. PPE use and limitations. Permit requirements. Fire prevention</li><li>15. Adequate instruction must be given to involve operatives including pre-start briefing prior to start the activity.</li><li>16. Ensure competent supervision and frequent monitoring.</li><li>17. Cables will be routed in such a way not to pose any trip hazards.</li><li>18. Use good welding holders and</li></ol>				
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									<p>cables in good condition. Do not use damaged cable leads and holders.</p> <p>19. Ensure electrode holder must be fully insulated to avoid electrocution.</p> <p>20. Prior to use, welding machine must be PAT tested ensuring all electrical components must be safe for operation.</p> <p>21. Maintain welding machine with approved spare parts and fittings including electrical cable and socket and free from any damages. Welders to check cables, socket and holders daily before use.</p> <p>22. Use only cable/cord as per manufacturer's specification.</p> <p>23. Welding machine must be monthly checked by competent electrician and tagged ensuring safe to use</p>					
82	<b>Use of DSE (display screen equipment)</b>	<ul style="list-style-type: none"> <li>❖ Improper use of equipment</li> <li>❖ Prolong exposure</li> <li>❖ Repetitive movement</li> </ul>	<ul style="list-style-type: none"> <li>➤ Upper limb pains and discomfort (WRULDs Repetitive Strain Injury)</li> <li>➤ Eye Strain</li> </ul>	Office staff	3	3	9	H	<ol style="list-style-type: none"> <li>1. Design the work activities of DSE users so as to give periodic breaks away from the screen.</li> <li>2. Carry out annual DSE workstation assessments and keep records of same.</li> <li>3. Provide suitable eyesight tests for users.</li> <li>4. Train all DSE users in the safe use of the workstation, including ergonomics, furniture adjustment, screens etc.</li> <li>5. Train workers in best working postures/procedures and recognition of potential strains.</li> <li>6. Ensure that all intricate work, such as developing drawings, is</li> </ol>	1	3	3	L	ADOSH SF CoP 8.0 General Workplace Amenities

									<p>done at computer workstations</p> <ol style="list-style-type: none"> <li>7. Screen – Must display clearly defined characters of adequate size.</li> <li>8. Must have adjustable brightness and contrast. Must have adjustable swivel and tilt</li> <li>9. Must be positioned free from reflective glare.</li> <li>10. The distance from your eyes to the screen should be between 330 – 60 cm.</li> <li>11. Keyboard – Should be made from non-reflective material.</li> <li>12. Must have clearly defined characters.</li> <li>13. Must have sufficient space in front of the keyboard to provide support for employee’s hands and arms.</li> <li>14. Work top – Must be sufficient size for work and provide enough room to allow employee to work.</li> <li>15. Worktops should be made of non-reflective surfaces. Chair – Must be stable.</li> <li>16. The seat and back must be adjustable in height and tilt. Provide a footrest for comfort to those who request it.</li> </ol>					
83	<b>Use of Office Equipment</b>	<ul style="list-style-type: none"> <li>❖ Spillages, slippery or sloping surfaces</li> <li>❖ Uneven surfaces / changes in floor level</li> <li>❖ Damaged or loose</li> </ul>	<ul style="list-style-type: none"> <li>➤ Upper limb pains and discomfort (WRULDs Repetitive Strain Injury)</li> <li>➤ Eye Strain</li> <li>➤ Injuries, Electrical Shocks.</li> </ul>	Office staff	3	3	9	H	<ol style="list-style-type: none"> <li>1. Adequate amount of storage space /shelving is provided</li> <li>2. Safe storage arrangements ensure that objects are stable and easily accessible</li> <li>3. Kick stool provided to reach high shelves in stationary room</li> <li>4. Filing cabinets – either have</li> </ol>	1	3	3	L	ADOSH SF CoP 8.0 General Workplace Amenities

		<ul style="list-style-type: none"> <li>❖ floor surfaces</li> <li>❖ Trailing cables,</li> <li>❖ obstructions such as boxes, bags, files etc</li> <li>❖ Manual Handling</li> <li>❖ Electric shock or</li> <li>❖ burns from contact with live parts due to damaged cables and casing</li> <li>❖ Faults or overloading of sockets causing</li> <li>❖ overheating and fire.</li> <li>❖ Injury from Machinery (moving parts, blades etc.)</li> </ul>							<p>safety feature (only one draw can be opened at a time) or warning notice affixed.</p> <ol style="list-style-type: none"> <li>5. All floor surfaces are in good condition</li> <li>6. Good housekeeping standards</li> <li>7. Gangways are free of obstructions/protrusions</li> <li>8. Storage along fire escape routes /near fire exits is prohibited.</li> <li>9. Manual handling leaflet provided to staff re.safe lifting techniques.</li> <li>10. Safe storage arrangements (e.g. heavier item stored at waist height to facilitate safe lifting, weight of objects stored at low or high level minimised.</li> <li>11. Reasonable fluorescent strip lighting provided.</li> <li>12. Additional angle-poise lamps available also.</li> <li>13. Blinds provided at windows.</li> <li>14. All equipment purchased meets EC standards</li> <li>15. Sufficient socket outlets are provided in each office.</li> <li>16. Portable appliance testing is carried out.</li> <li>17. Fixed guarding preventing access to dangerous parts of machinery, an blades enclosed</li> <li>18. Follow manufacturers instructions</li> <li>19. Service contract for photocopier</li> <li>20. Photocopier located in separate room away from workstations to minimise distraction</li> </ol>			
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									from noise ; window by photocopier can be opened to improve ventilation 21. Sealed toner cartridges used.					
84	<b>NDT Testing</b>	❖ Personnel exposure during testing process	➤ Serious ill-health effect e.g. damage to living tissue/organs Radiation cancer/burns	Site Workers • Site Staff • Site Visitor	3	4	12	H	1. Plan in advance, location where isotopes being sited MUST be completely demarcated and barricaded and sign posted indicating the impending hazard of radiation. 2. Restrict any unnecessary movement in close proximity. 3. MUST be shifted with suitable container ensuring adequately sealed until finally brought to the activity area. 4. Only authorized person to unload and shift the equipment and ensure all involved personnel MUST wear film badges. Ensure new film badges will be issued. 5. Never stop or park vehicle in close proximity to other workforce. 6. Ensure appropriate protective shielding device MUST be set-up at the activity area including audible monitoring alarm. 7. Ensure survey meter appropriately operational when unloading the projector from vehicle storage are. 8. Check all radiography equipment MUST be in good working condition, calibrated and tested by 3rd party company. 9. Check vital components (e.g.	1	4	4	M	Federal Law No.1 of 2002 - Use of Radiation Ministerial Decree (56 2004) Radioactive Materials Ministerial Decree (57 2004) Regarding the Regulations for Radioactive Waste Management

								<p>camera, driving unit, guide tube) of radiography equipment, damaged or suspected damaged shall cease the use of equipment.</p> <ol style="list-style-type: none"><li>10. Obtain permit from OME HSE department and ensure precautions MUST be provided prior initiate radiographic test.</li><li>11. Testing MUST be carried out during Friday or night time to avoid exposure of other trade.</li><li>12. Ensure testing area MUST be completely demarcated and barricaded isolating the radiography equipment with sufficient boundary from other activities.</li><li>13. Controlled area should be isolated using tiger tape.</li><li>14. Only radiography operator and RPO/RPS MUST access the testing area.</li><li>15. Ensure the use of film badge and personal dosimeter.</li><li>16. Dosimeter MUST be check prior to use and ensure it has been calibrated.</li><li>17. Testing MUST be adequately controlled from any possible unauthorized access of other personnel.</li><li>18. Signage to be posted indicating "HIGH RADIATION AREA" for at least 6 warning sign boards.</li><li>19. Watchman to be deployed with a suitable distance from the testing area to restrict any unnecessary movement.</li><li>20. Ensure appropriate shielding</li></ol>				
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								<p>system to be provided by a particular isotope using a dense material with suitable thickness against the radiation as per manufacturer's instruction prior to commence radiographic testing.</p> <ol style="list-style-type: none"><li>21. Where necessary, collimators to be used to direct only the striking beam into the material being tested.</li><li>22. No personnel MUST be positioned inside the controlled area once testing started.</li><li>23. Control panel for (using X-ray) or winding cable (using gamma ray) MUST be appropriately positioned outside the controlled, if not avoided, ensure sufficient distance from the radiation source.</li><li>24. Where possible reduce the power of radiography equipment emitting radioactive materials.</li><li>25. Reducing the source to film distance</li><li>26. Reducing the time exposure to enable within the allowable occupational exposure limit. Exposure MUST monitor and calculated every after shift to calculate required weekly exposure in proportion to the total exposure limit/year.</li><li>27. In case of emergency of emergency immediately switch off radiography machine.</li><li>28. Ensure full competency of the operator and provision of</li></ol>				
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									continuous supervision until testing completed. 29. Do not leave the testing controlled area unattended.					
85	Presence of insects (ants, bees, mosquitoes, wasps, Scorpions, Snakes, spiders) in excavation area, bushes, or soil	<ul style="list-style-type: none"> <li>❖ Insect bites/stings leading to allergic reactions, infections, or distraction causing secondary accidents.</li> <li>❖ Severe injury, possible fatality.</li> <li>❖ Panic leading to fall inside excavation or improper use of equipment</li> </ul>	<ul style="list-style-type: none"> <li>➤ Skin irritation, swelling, infection</li> <li>○ Allergic reaction / anaphylaxis. Distraction causing slips/trips/falls</li> <li>➤ Slips, trips, falls inside excavation.</li> <li>➤ Dropping of tools/materials</li> <li>➤ Secondary injuries (fractures, cuts)</li> </ul>	<p>Workers inside excavation, supervisors, visitors.</p> <p>Workers, night shift staff, security guards</p>	3	3	9	H	<ol style="list-style-type: none"> <li>1. Pre-work survey, restrict unauthorized access, display warning signage, emergency response plan with hospital contacts.</li> <li>2. Adequate night lighting.</li> <li>3. Provide insect repellents.</li> <li>4. Toolbox talks on insect hazards.</li> <li>5. Clear debris, stones, and scrap before excavation.</li> <li>6. Inspect excavation daily before entry, awareness training on scorpion, snake or other insects identification and response.</li> <li>7. Regular pest/rodent/insect control program.</li> <li>8. Provide safe access/egress (ladders, barricades).</li> <li>9. Proper supervision and monitoring</li> <li>10. Wear mandatory PPE .</li> <li>11. First aid availability, emergency medical support .</li> <li>12. Emergency contact numbers to be posted and availability of an emergency vehicle.</li> </ol>	1	3	3	L	ADOSH SF CoP 8.0 General Workplace Amenities
86	Occupational Noise	<ul style="list-style-type: none"> <li>❖ Heavy Vehicles &amp; Equipment</li> <li>❖ Generator</li> <li>❖ Air Compressor, Vibrators</li> <li>❖ Cutting &amp; Grinding</li> </ul>	<ul style="list-style-type: none"> <li>❖ Hearing loss, fatigue, stress, reduced concentration.</li> <li>❖ Ear fatigue, tinnitus (ringing in the</li> </ul>	Operatives Involve in work ,Visitors	4	3	12	H	<ol style="list-style-type: none"> <li>1. Limit worker exposure duration near operating machinery.</li> <li>2. Establish vehicle movement routes to minimize exposure of other workers.</li> <li>3. Conduct periodic noise level measurements at various site</li> </ol>	1	3	3	L	ADOSH SF CoP 3.0 – Occupational Noise

		<p>Machines ❖ Welding &amp; Fabrication Works.</p>	<p>ears), long-term hearing damage ❖ Stress, discomfort, and reduced concentration during operation. ❖ Misunderstanding of signals or instructions, increased risk of accidents and collisions</p>				<p>locations. 4. Include noise awareness in toolbox talks and operator safety inductions. 5. Keep cab doors and windows closed during operation to reduce exposure. 6. Schedule maintenance to prevent rattling, loose parts, and exhaust leaks. 7. Designate equipment parking and idling zones away from site offices or welfare areas. 8. Conduct noise surveys every 6–12 months or after introduction of new machinery. 9. Install acoustic enclosures / soundproof canopy for generators and compressors. 10. Fit silencers or mufflers on exhaust systems. 11. Position generator/compressor units away from occupied or work areas (minimum 10–15 meters). 12. Place units on vibration-absorbing mounts to reduce mechanical noise. 13. Conduct regular preventive maintenance to avoid excessive noise from loose or worn parts. 14. Restrict access to generator/compressor area to authorized personnel only. Display “HEARING PROTECTION MUST BE WORN” signage. 15. Use noise-dampened cutting and grinding tools with built-in silencers. 16. Ensure regular maintenance and</p>			
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									replacement of worn-out discs or bearings.					
									17. Perform periodic noise monitoring with a calibrated sound level meter.					
									18. Include noise hazard awareness in toolbox talks and training.					

## RISK LEVEL MATRIX

Severity of Risk	Rating	Definition
Insignificant	1	Causing negligible Injury requiring first aid such as scratch
Low	2	Causing minor Injury (outpatient) or health effect
Medium	3	Causing major injury requiring hospitalization or illness such as stitches, sprain, laceration
High	4	Causing Single fatality / permanent disabling injury or illness
Extremely High	5	Causing multiple fatalities / permanent disabling injury or illness

Likelihood of Risk	Rating	Definition
Insignificant	1	Highly unlikely, but maybe an occurrence in exceptional circumstances. It could happen, but probably never will.
Low	2	Not expected, but there's a slight possibility there may be an occurrence at some time.
Medium	3	The event might occur at some time, medium probability
High	4	There is a strong possibility of occurrence
Extremely High	5	Very Likely, high chance of occurrence

Risk Matrix	Severity (S)					
		1	2	3	4	5
Likelihood (L)	1	Low (L) 1	Low (L) 2	Low (L) 3	Medium (M) 4	Medium (M) 5
	2	Low (L) 2	Medium (M) 4	Medium (M) 6	High (H) 8	High (H) 10
	3	Low (L) 3	Medium (M) 6	High (H) 9	High (H) 12	Extreme (X) 15
	4	Medium (M) 4	High (H) 8	High (H) 12	Extreme (X) 16	Extreme (X) 20
	5	Medium (M) 5	High (H) 10	Extreme (X) 15	Extreme (X) 20	Extreme (X) 25
Key	S = Severity L = Likelihood Rating = S X L		<b>Score:</b> 15 - 25	Extremely high		
			8 - 12	High		
			4 - 6	Medium		
			1 - 3	Low		

Risk Level	Steps to control the risk
Extremely High (15-25)	Don't start work, or continue working until the risk has been reduced, regardless of the cost of the control measures. If it's not possible to reduce the risk, don't start work
High (8-12)	Delay work or restrict activities until the risk has been reduced to a more acceptable level. Considerable resources may be needed to reduce the risk. If work is in progress, take urgent and immediate action to reduce the risk. Review the risk frequently. Breach of legal requirements is always considered high risk.
Medium (4-6)	Introduce control measures to reduce the risk – including a timescale for implementing the controls. Consider the cost-effectiveness of the control measures. Review the risk on a regular basis
Low (1-3)	Control measures are not necessarily needed but consider better solutions that don't involve extra costs. Monitor the situation to keep risk under control.