|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Working on mobile scaffolding | **Work at height**   * Fall form height * Falling objects * Over loading * Protruding objects * Access & egress | Operatives/Staff/  Visitors  Others | 3 | 4 | 12 | Medium | 1. STARRT card briefing must before start the activity 2. Ensure the PTW in place and comply the procedure. 3. Ensure proper working platform with complete fall protection 4. Ensure Full body harness and 100% Tie off 5. Ensure the scaffold platform is properly erected with "Safe to use" tag. 6. Ensure castor wheels are locked 7. Hand tools must be secured/tethered 8. Work materials strictly not allowed to be stored on platform except for working tools 9. Ensure avoid over reaching and climb on handrail. 10. Ensure unauthorised person not allowed to modify the scaffolding and if needed to any changes then must be modified by trained and certified scaffolder. 11. Ensure safe access to the working platform 12. Scaffold access must be free from obstruction 13. Ensure sufficient illumination in work area | 1 | 4 | 4 | Low | Supervisors Foreman, Site Eng. | |
| 2 | Use of Ladder | * Falling from height * Working on Uneven ground * Falling objects | Operatives/  Staff/ | 3 | 4 | 12 | Medium | 1. Ladder is not to use daily basis but in certain cases where there is very narrow place and even podium ladder not possible to place in that cases Ladder can be use if permission granted from McLaren Safety 2. Never try to overreach with any ladders 3. Check the ladder is adequately maintained and free from damages/good condition 4. Maintain a minimum of 3 points of contact with stepladders at all times (feet/thighs/hands) 5. If possible avoid the use of stepladders at a working height of 2 meters and more. 6. Check the ladder legs (and stays) are fully deployed or locked (depending on type) to maintain maximum base dimensions and the step ladder is orientated to provide maximum stability. 7. Stepladders/ladders has to be used on leveled ground/firm base 8. Ensure that during using ladder from the top 2 step is blocked to avoid climb on that. 9. The ladder securely fixed to prevent slipping outwards or sideways or securely footed at all times. 10. Person must hold the ladder while another operative working on it 11. Materials should not be placed above the thread of ladders/step ladders 12. Do not carry any materials in one hand while climbing or getting down from ladder 13. Ensure the area under the ladder is barricaded especially if it is being used in a public area. 14. Ensure the ladder is electrical insulated podium type if working in live services | 1 | 4 | 4 | Low | Supervisor Site Eng.  Foreman, | |
| 3 | Flushing activity for Chilled water piping | * Injury due to slips trips and falls. * Test kit may failure if not maintained. * Injury due to manual handling * Side effect of chemical such as burn or skin contact or eye injury. * Environment Hazard | Operatives involved | 3 | 4 | 12 | Med | 1. Ensure the work permit obtained before the activity. 2. STARRT card to be filled and briefed to the operatives. 3. All the Flushing kits must be calibrated 4. Ensure all the chemicals used for flushing activity must have MSDS and COSHH assessment. 5. Ensure all the risk factor of Chemicals and control measure must brief to the operatives. 6. Work area must be barricaded with caution signage. 7. Spill kit must be in place. 8. Work area will be kept tidy and dry to minimize trip hazards and slippery floor. 9. Ensure that after flushing activity should not drain the water in direct soil to pollute the environment. 10. Ensure all operatives are trained and competent for the flushing activity. | 1 | 4 | 4 | Low | Site engineer  Supervisor  Foreman | |
| 4 | Use of Chemicals-Hazardous Substance | * Spillage/ soil contamination * Burns * Contact with skin * Acute/Chronic adverse heath effect. * Fire | Operatives using solvent | 3 | 4 | 12 | Medium | 1. Ensure that all chemical substances have a COSHH assessment 2. Refer SDS prior to any handling of hazardous substances and ensure SDS is easily accessible at site while working with chemicals. 3. Ensure chemicals are properly stacked. 4. Ensure all chemical containers are properly labeled. 5. Spill kits to be available at site. 6. Ensure operatives use the correct PPE 7. Competent person to oversee the storage, use and disposal of hazardous materials. 8. Ensure that correct welfare/first aid facilities are available in the area i.e. washing facility/eye wash. 9. Proper and adequate PPE to be used always 10. Ensure all chemical containers are properly labeled. 11. Adjust work schedules so that workers are not overexposed to a hazardous chemical. 12. Wear respiratory protection 13. Ensure proper and adequate PPE to be used always. 14. Ensure smoking only in designated area 15. Ensure appropriate Firefighting equipment’s are in place and easily accessible | 1 | 4 | 4 | Low | Supervisors Foreman,  Site Eng. |
| 5 | Use of power tools and pump | * Damaged Sockets & cable insulation. * Electrocution * Electric shock * Short circuit & Burns * Trip/Fall * Noise * Hearing loss * Vibration * Dust | Operatives and staff | 3 | 4 | 12 | Medium | 1. All portable electrical equipment must be PAT tested and color coded. Make sure the test dates are visible on the equipment. 2. Ensure all disk shall be appropriate and expiry date is over. 3. Ensure all power tools are in good condition and periodically maintained 4. PTW to be obtained for above 110 volt electrical permit prior to commencing the task. 5. Damaged industrial sockets and power cables must be removed from service. 6. Ensure the electrical cable is not damaged and has not been repaired with insulating tape or unsuitable connectors. 7. Ensure cables from power tools shall be organized so as not to present a tripping hazard 8. Only trained competent operatives to operate the power tools. 9. Ensure proper and regular maintenance of equipment that takes account of noise 10. Ensure proper hearing protection always. 11. Make sure people use the right tool for the job and are trained to use it correctly 12. Ensure defective tools that require maintenance is reported for repair or replacement. 13. Instruct workers to keep their hands warm and dry, and to not grip a vibrating tool too tightly. 14. Ensuring proper job rotation and limiting time operatives working with power tools and hand tools. 15. Use dust mask 16. Ensure proper earth leakage protection is provided. 17. All power tools must be 110V to be ensured. | 1 | 4 | 4 | Low | Supervisor  Foreman  Site Eng. |
| 6 | Use of Hand tools | * Improper selection of hand tools. * Damaged and Defective Hand tools. * Hand injuries * Pinch point * Ergonomics * Repetitive strain injury | Operatives/Staff | 3 | 3 | 9 | Medium | 1. Hand tools should be visually inspectedfor defects, prior to use. 2. Never use damaged, blunt or broken tools to avoid injury. 3. Select right tools for right Job 4. Ensure no Homemade or makeshift tools to be used at site 5. Remove from service any tool that shows signs of damage or defect 6. Ensure Hand tools are Stored in accordance with the manufacturer’s instructions. 7. Ensure hands are not in direct line of fire while working with hand tools 8. Ensure appropriate PPE at all times**.** | 1 | 3 | 3 | Low | Site engg  Supervisor  Foreman | |

Approved By: Name Position \_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

**RISK ASSESSMENT & CONTROL GUIDELINES**

1. **Executing Steps:**
   1. **Planning**
2. Construction and HSE team must ensure that hazard identification is complete.
3. Construction and HSE team must prioritize the hazard issues, which are of significant in nature. (It means that risks have well established legal requirements, potentially high risks).
4. Construction and HSE team to prepare the risk assessment plan for the priorities identified hazards for these potential high risks.
   1. **Risk Assessment**

Risk is the probability of an event occurring in a given set of circumstances. The ‘event’ is an exposure to hazard. The hazard is the potential to cause harm. The risk assessment is the technique of evaluating not just the likelihood of an event occurring, but also the outcome will be in terms of injury, loss, damage or harm.

* 1. **Risk Assessment Process**

The process of carrying out a risk assessment should be as follows.

1. Identify the hazards.
2. Identify who might be harmed and how.
3. Evaluate the risk and implement the control measures.
4. Record the significant findings.
5. Review the assessment and update if necessary.
   1. **Examination of the Hazards and Risk Associated**

* Competent staff must be used in examining the risk associated with the identified hazard.
* Competent staff should examine following aspect to determine the risk involved:
* Examine the existing control measures in place.
* Identify employees at risk.
* Likelihood of risk.
* Severity
* Risk level and their tolerability.
  1. **Evaluating the risk:**

Once the necessary information has been obtained on the hazards encountered by work activities, next stage is to access the risks.

* + 1. **Risk Rating Score**

Risk rating score is a combination of two factors.

* The severity of the risk that could injure persons or cause damage to plant.
* The likelihood of the risk that it could happen (Probability).

**RISK RATING = LIKELIHOOD X SEVERITY**

**NOTE: Each activity has to be assessed for the risk value for determining the level of Severity and likelihood are mentioned in the table below.**

**SEVERITY**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **No Injury (1)** | **Minor Injury (2)** | **Moderate Injury (3)** | **Major Injury (4)** | **Catastrophic (5)** |
| **Rarely (1)** | **1** | **2** | **3** | **4** | **5** |
| **Unlikely (2)** | **2** | **4** | **6** | **8** | **10** |
| **Possible (3)** | **3** | **6** | **9** | **12** | **15** |
| **Likely (4)** | **4** | **8** | **12** | **16** | **20** |
| **Almost Certain (5)** | **5** | **10** | **15** | **20** | **25** |

**LIKELIHOOD**

**RISK LEVEL:**

|  |  |  |
| --- | --- | --- |
| **Low** | **Medium** | **High** |