



# EHS Requirements for Critical Contractors

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## EHS Requirements for Critical Contractors

### 1 OBJECTIVE

The objective of this work instruction is to define PSM’s EHS requirements for Critical Contractors, working for PSM at PSM’s customers sites.

### 2 APPLICATION AREA

This work instruction is applicable to all customer sites where PSM retains Critical Contractors for services.

NOTE: Please see definition of Critical Contractor in section 5.0 below

### 3 RESPONSIBILITIES

#### 3.1.1 Critical Contractor

Critical Contractors are responsible for the following:

- Ensuring that the Contract Works are always performed in compliance with the EHS Requirements :
  - In case any requirement contained in this document is of a lower standard than the local Law, the local Law shall apply
  - In case compliance to any requirement contained in this document would result in a breach of the Law, then the corresponding requirement is not applicable
- Ensuring that Contractor Personnel, personnel of its own contractor(s) and any visitor to site, are fully aware of, and comply with, the EHS Requirements at all times, during performance of the Contract Work or while on Site, including the procedures to be followed in cases of emergency.
- Including PSM’s EHS requirements in the legal agreement established with its own contractors. The Ordering Party reserves the right to verify that the Contractor and all Contractor Personnel meet the EHS Requirements.
- Completing and submitting to the Ordering Party, for review and approval, a “Contracted Works” Risk Assessment, meeting the requirements established in section 6.1.2.

### 4 REFERENCE DOCUMENTS

- Contact Terms & Conditions (T&Cs)

### 5 TERMINOLOGY, DEFINITIONS, ABBREVIATIONS

Term	Definition
<i>Confined Space</i>	A workspace that meets all the following: <ul style="list-style-type: none"> <li>• Is large enough for an employee to enter fully and perform assigned work;</li> <li>• Is not designed for continuous occupancy by the employee; and</li> <li>• Has a limited or restricted means of entry or exit.</li> </ul> *NOTE: These spaces may include underground vaults, tanks, storage bins, pits, exhaust manifolds, intake plenum, vessels, silos and other similar areas.

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<b>Term</b>	<b>Definition</b>
<i>Confined Space, Non-Permit</i>	<p>A confined space that does not contain, or have the potential to contain, any recognized safety or health hazard, nor will the work performed within the confined space create a serious safety or health hazard. Examples may include:</p> <ul style="list-style-type: none"> <li>• Vented vaults (if not for control of hazardous atmosphere),</li> <li>• Motor control cabinets, and</li> <li>• Dropped ceilings.</li> </ul>
<i>Confined Space, Permit-Required</i>	<p>A confined space that has one or more of the following serious safety or health hazards (characteristics):</p> <ol style="list-style-type: none"> <li>1. Contains or has the potential to contain a hazardous atmosphere; <ul style="list-style-type: none"> <li>• O<sub>2</sub> less than 19.5% or greater than 23.5%</li> <li>• LEL greater than 10%</li> <li>• CO greater than 25 ppm</li> <li>• SO<sub>2</sub> greater than 2 ppm</li> </ul> </li> <li>2. Contains a material with the potential to engulf someone who enters the space;</li> <li>3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section; and/or</li> <li>4. Contains any other recognized serious safety or health hazards. <ul style="list-style-type: none"> <li>• Space is not ventilated (natural or mechanical)</li> <li>• Energy is not isolated (LOTO)</li> </ul> </li> </ol>
<i>Contract</i>	It means the contract or subcontract entered between PSM and the Contractor for the performance of "Contract Works".
<i>Contract Works</i>	It means all work and services to be performed by the Contractor under the Contract
<i>Contractor</i>	A non-PSM company, which is engaged by PSM under a contract, subcontract or purchase order, and assumes all normal entrepreneurial risks to provide the "Contract works" at PSM's premises, or on a PSM's customer site or a 3 <sup>rd</sup> party site that is managed by PSM.
<i>Contractor Personnel</i>	It means the Contractor's employees, agents, visitors, and all persons employed or engaged on or in connection with the Contract Works or any part of them and any other person on the Site in connection with the Contract Works.
<i>Critical (High Risk) Contractor</i>	Contractors involved in <b>High-Risks Activities</b> during the Contract Works.
<i>DOA</i>	Division of Responsibilities
<i>EHS</i>	Environment, Health and Safety.
<i>EHS Events</i>	Any unplanned or undesired "occurrence" or situation that causes (or has the potential to) death, injury/illness, property damage, impact on the environment or impact on the PSM image/reputation
<i>EHS Requirements</i>	It means collectively the requirements relating to EHS or the management of EHS set out in the applicable Law, the Contractor Risk Control Plan and the requirements of this document.

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<b>Term</b>	<b>Definition</b>
<i>Electrical work</i>	Manufacturing, constructing, assembling, installing, testing, maintaining, repairing, altering, removing, or replacing of electrical equipment involving an electrical hazard, i.e. a dangerous condition where a worker could make electrical contact with energized equipment or a conductor, tracking through or across a medium or by arcing and from which the person may sustain an injury from shock (electrocution) and/or there is potential for the worker to receive an arc Flash burn, thermal burn, or blast or fire injury
<i>Excavation</i>	An excavation is a cavity in the surface of the ground created by deliberate human action that removes earth. An excavation can be of any size or shape. A trench is a specific type of excavation, a human-made narrow surface cavity that is deeper than it is wide and is less than a certain width possibly defined by local Regulations.
<i>Fall zone</i>	Area where the load can fall in case of a lifting accident. This area can vary according to the phase of the lifting operation, height of the load, how load is attached, shape of the load, etc.
<i>High-Risk Activities</i>	<p>Activities involving:</p> <ul style="list-style-type: none"> <li>• Erection, modification and dismantling of scaffolds</li> <li>• Excavation works</li> <li>• Hot Works (in any temporary area, not routinely utilized to perform hot works)</li> <li>• Non-Routine Lifting operations</li> <li>• Lone working</li> <li>• Work in confined spaces</li> <li>• Work at height</li> <li>• Works for which Lock-out / Tag-out must be performed</li> <li>• Work on live equipment</li> <li>• Works involving a risk of interference with moving vehicles e.g. in construction work <ul style="list-style-type: none"> <li>• where there is no means of segregating workers near vehicles</li> </ul> </li> <li>• Works in explosive atmosphere</li> <li>• Work with exposure to radiation</li> <li>• Work on, in, over or near water</li> <li>• Installing, maintaining and operating machines (limited to non-routine operation and if so, as required by the risk assessment)</li> </ul>
<i>Law</i>	It means the laws, regulations, orders, codes, standards or bylaws of any local or national authority having the force of law in the country where the Contract Works are to be performed.
<i>Lifting accessory</i>	Are pieces of equipment that are used to attach the load to lifting equipment, providing a link between the two. Examples of lifting accessories include slings, chains (single or multiple leg), hooks, eyebolts, spreader beams and shackles.
<i>Lifting equipment</i>	Equipment used for lifting or lowering loads. It includes but is not limited to cranes, lifting jacks, powered forklifts.
<i>Lifting Supervisor</i>	Person trained and therefore having the sufficient skills, knowledge and experience to supervise lifting operations.

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<b>Term</b>	<b>Definition</b>
<i>Lifting, Non-Routine</i>	<p>Lifting operations which meet one or more of the following criteria:</p> <ul style="list-style-type: none"> <li>• Lifting a load where the weight is 75% (including rigging) or more of the crane capacity, with a single crane.</li> <li>• Lifting a load for which a lift plan has not been developed.</li> <li>• Operations involving more than one item of lifting equipment (i.e. two or more cranes) at the same time.</li> <li>• Lifting a load in an area which have limitations for the length of crane boom</li> <li>• Lifting people (excluding use of MEWP or lifts).</li> <li>• Use of equipment not specifically designed for lifting (backhoe excavator), just in the rare case it is authorized</li> </ul>
<i>Lifting, Routine</i>	<p>Repetitive lifting operations and lifting operation not classified as Non-Routine; examples of lifting equipment generally provided for Routine lifting operations include:</p> <ul style="list-style-type: none"> <li>• Customer site hoist</li> <li>• Mobile Elevated Work Platform (MEWP) used for general maintenance</li> <li>• A suspended cradle used for window cleaning</li> <li>• A vehicle tail lift</li> <li>• Use of a fork truck</li> </ul>
<i>Lockout Device</i>	A device that utilizes a lock and key to hold an energy isolating device in a defined safe position.
<i>Lockout Tagout</i>	The placement of a lock and a tag (or a tag-out device) on the energy isolating device in accordance with an established procedure, ensuring that the energy isolating device cannot be operated, and the relevant equipment is isolated until removal of the lock and tag (or tag-out device).
<i>Machine</i>	General term used in this document to categorize any work equipment with machinery components, excluding portable tools.
<i>Machinery</i>	An assembly fitted with or intended to be fitted with a drive system other than directly applied human or animal effort, consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application. This includes lifting equipment and mobile work equipment.
<i>Ordering Party</i>	It means PSM or an incorporated or unincorporated consortium in which PSM participates.
<i>Permit issuer</i>	PSM employee with an operational management position (or a representative of PSM), who has been authorized to issue, clear and cancel permits and takes the responsibility to say it is relevant.
<i>Permit receiver</i>	The person (including employee of a Contractor), who is responsible for the planning, supervision and performance of any activity subject to Permit-to-Work.
<i>Permit-to-Work (PTW)</i>	Written document, issued by Permit issuer which allows a person or a team to perform work at a specific site and for a specific period of time, observing preventive and protective measures.
<i>Portable Machining Tools</i>	These are portable power tools as described above which are used for machining activities such as drilling, grinding, cutting, trimming, boring, etc.

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<b>Term</b>	<b>Definition</b>
<i>Relevant authority</i>	Organization in charge of the supervision, safe processing and thus authorization of tasks given to the Contractor. The relevant authority may depend of the nature of the task and the given situation but have to be clearly identified by the Ordering Party for the Contractor.
<i>Risk</i>	Effect of uncertainty deriving from a (partial) deficiency of information related to an event, its consequence and its likelihood. An effect is a positive or negative deviation from that expected.
<i>Risk Assessment (RA)</i>	Environmental, Health & Safety (EHS) Risk Assessment is a document which records the identified EHS hazards associated with specific activities/tasks, evaluating these hazards for probability and consequences, and identifies control measures to mitigate these hazards (such as guards, procedure, training, PPE, etc.).  The EHS Risk Assessment shall be prepared by the Contractor, reviewed and approved it by the Ordering Party.
<i>Routine work/activity</i>	Activities included in a standard operating cycle (e.g. welding at authorized HOT Work areas, lifting turbine parts in FSS)
<i>Safeguarding (primary)</i>	It includes two different types of safeguarding: <ul style="list-style-type: none"> <li>• Guards providing physical barriers that prevent access to danger areas</li> <li>• Safeguarding devices, which either prevent or detect operator contact with the point of operation or stop potentially hazardous machine motion if someone is entering the hazardous part of the machine (for example, light curtain, radars and interlocks).</li> </ul>
<i>Safeguarding (secondary)</i>	Includes detection safeguarding which does not prevent operators from placing or having any part of their body in the hazardous machine areas (for example, warning signals, safety distance, emergency shut-down systems).
<i>Severe EHS Event</i>	Any event that has caused (severe accident or severe environment accident) or could cause (severe ENV or HS near miss): <ul style="list-style-type: none"> <li>• Fatal accidents</li> <li>• Any accident resulting in permanent disfigurement or disability (loss of senses)</li> <li>• Any accident causing fracture requiring surgery,</li> <li>• Any lost time accident</li> <li>• Major property damage &amp; business interruption</li> <li>• Substantial environmental impacts (e.g. heavy or very heavy contamination, localized or widespread effects of extended duration) and/or requiring notification of local Authority(ies)</li> <li>• Any event or situation which could materially affect PSM and/or PSM Company image</li> </ul>
<i>Site</i>	It means the place or places provided or made available to the Contractor to which plant, materials, tools and equipment are to be delivered, stored or at which Contract Works is to be performed, together with any other surrounding places as the Contractor may actually use in connection with the Contract Works, including access thereto.

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Term	Definition
<i>Site Specific EHS Induction</i>	It means the site induction training informing employees and contractors about the site specific EHS program and requirements.
<i>Trench</i>	Narrow excavation (in relation to its length) made below the surface of the ground. In general, the width (measured at the bottom) is no greater than 16 ft (5 m).
<i>Work at Height</i>	Work in any place, including a place at or below ground level and roofs, where a person could fall such a distance liable to cause personal injury. Access and egress to a place of work can also be work at height. Work at Height does not include stairways or slips or trips on the same level.

## 6 INSTRUCTIONS

### 6.1 Contractor Requirements for EHS Management

#### 6.1.1 EHS Meetings

- a. If requested by the Ordering Party, the Contractor shall attend EHS meetings to communicate and discuss EHS issues.
- b. The Contractor's Site Manager and if applicable the Contractors EHS Manager shall attend as required. If either is unable to attend then, a suitable member of the Contractor Personnel (as approved by the Ordering Party) shall attend on their behalf.

#### 6.1.2 Risk Assessments

The contractor shall conduct suitable EHS risk assessments for all activities to be carried out by the contractor.

##### 6.1.2.1 General requirements:

- a. The Contractor shall submit to the Ordering Party, for review and approval, a "Contracted Works" EHS Risk Assessment.
- b. The Ordering Party may reject the Contractor EHS Risk Assessment, if the Ordering Party considers such plan doesn't comply with all EHS Requirements. In such case, the Contractor shall remedy the deficiency and re-submit the plan to the Ordering Party for further review and approval.
- c. The Contractor shall not be authorized to commence any activity on Site before having obtained formal approval of the Contractor EHS risk assessment by the Ordering Party.
- d. The Ordering Party shall not be held responsible for delays and additional costs due to late submission of the Contractor Risk Control Plan.
- e. The Ordering Party shall not be held responsible for delays and additional costs due to late submission of any risk assessment.
- f. All costs for conducting risk assessments and preparing method statements shall be borne by the Contractor.
- g. If any risk assessment is not compliant to the EHS requirements (or the risk rating is above "safe levels"), the Contractor shall rectify such deficiency immediately upon request at the Contractors cost.

##### 6.1.2.2 Time Frame

The completed risk assessment shall be presented to the Ordering Party within the time period requested, and before the commencement of Contract Works on the Site.



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### 6.1.2.3 Risk Assessment contents:

#### 6.1.2.3.1 The risk assessment shall :

- a. Identify and evaluate all EHS hazards associated with the specific work/project (Contractor Works).
  - EHS hazards shall be classified and ranked according to risk based on the probability and severity of an event.
- b. Identify the necessary control measures (such as guards, procedure, training, PPE, etc.) to mitigate hazards.
  - Control measures for mitigating hazards (risk) must follow the OSHA hierarchy of controls (figure 1) when feasible.

#### 6.1.2.3.2 In addition to the above, the risk assessment shall also cover the following:

- Project Name
- Location/sector/zone
- Name of Client
- Name of Main Contractor
- Scope of activities
- Contract specification(s)
- Manpower requirements
- Tool/equipment requirements
- Project organization structure and EHS responsibilities
- Emergency arrangements (emergency rescue, evacuation, contact list, ...)

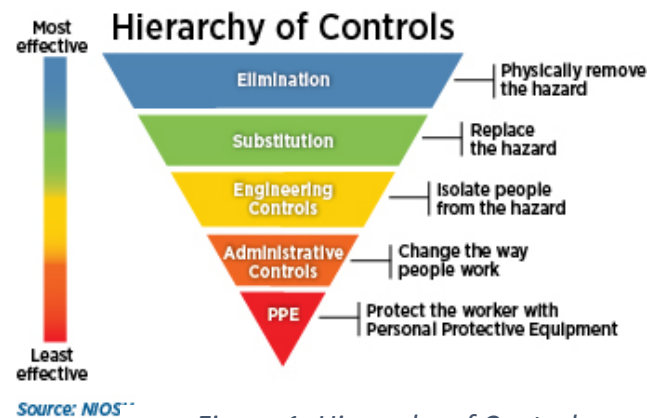


Figure 1: Hierarchy of Controls

### 6.1.2.4 Risk Assessment Communication

- a. Before starting work, the EHS Risk Assessment, including the identified EHS hazards and risk control measures shall be communicated & explained by the Contractor Manager/or Supervisor to the Contractor Personnel carrying out the respective Contract Works in comprehensive manner.
- b. All Contractor Personnel so informed shall sign a "sign-off-sheet" to confirm that they have understood the risk control measures. The documentary evidence that Contractor Personnel were informed of EHS risk assessments must always be available at the Site for the purpose of reviewing and auditing by PSM.
- c. Permits must be obtained for Permit Required Confined Space, Hot Work and Energized Electrical Work. The permit receiver and the permit issuer must inspect the works covered under the Permit to ensure all defined control measures are implemented prior to the issuing of any permit. Before starting work, all workers working under the Permit must receive a briefing on the control measures stated in the permit.

### 6.1.3 Security and Identification

- a. The Contractor shall submit the full names and other necessary details of all the Contractor Personnel to be employed at the Site, as and when required by the Ordering Party in relation to site security.
- b. The Site induction procedure must be adhered to for the induction of all Contractor Personnel.
- c. The Ordering Party may refuse the access to the Site to any of the Contractor Personnel in case of non-compliance to the EHS Requirements (e.g. individuals are unable to attend and, where relevant, pass the Site Specific EHS Induction), and such refusal shall not form the basis of any claim from the Contractor for any delays or costs incurred.
- d. All Contractor Personnel are required to wear an identification system with their name and the name of their company (e.g. uniform, name on hardhat).
- e. The Contractor must advise the Ordering Party immediately of any potential threat to security or health and

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- safety that they become aware of at Site, including intruders, suspicious packages, danger to safety of persons, goods or property or risk of explosion or pollution.
- f. The Contractor shall co-operate with the Site Security Services with respect to reporting of security incidents, closing and locking of gates, visitors, vehicles and any other matters to be reasonably requested.
  - g. Contractor Personnel shall be restricted to the area in which they are working.
  - h. The Contractor is responsible for the security of all plant, materials, tools and equipment used for its activities, whether owned or rented by or on behalf of the Contractor.
  - i. Inspection of the Contractor's vehicles (or being under Contractor's responsibility) may be requested by the Ordering Party, and in case of refusal of such inspection by the driver, the vehicle shall not be authorized to enter the Site.

**IMPORTANT**

**FIREARMS AND/OR WEAPONS ARE PROHIBITED ON SITE AT ALL TIMES.  
CONTRACTOR PERSONNEL CARRYING FIREARMS AND/OR WEAPONS ON SITE WILL  
BE ESCORTED OFFSITE IMMEDIATELY.**

### 6.1.4 Manpower

- a. The Contractor shall provide competent and suitable Personnel for the Contract Works to be carried out.
- b. The Contractor and Contractor Personnel admitted to Site must always conduct themselves in an orderly and safe manner and conform to the EHS Requirements.
  - Fighting, engaging in horseplay, being under the influence of or possessing alcohol or drugs, stealing, immoral or otherwise undesirable conduct is not permitted and shall not be tolerated on site.
  - Upon knowledge of such conduct, the Ordering Party may exclude immediately the concerned person from the Site, and will inform the Contractors manager accordingly, and the Contractor will take all appropriate measures.
- c. The Contractor shall provide the number of qualified, suitable and experienced persons to manage all EHS matters on Site relating to the Contract Works, in accordance with the applicable Law and, as defined and agreed in Contractor Risk Control Plan.
  - EHS Manager and other EHS Professionals shall be formally qualified and be able to justify an enough EHS level of experience in related industry.
- d. The Contractor shall ensure that all Contractor Personnel performing High-Risk Activities are medically fit to carry out the task in accordance with the EHS Requirements.
- e. All Contractor's and Contractor Personnel shall be in possession of the necessary licenses and certificates that are required for the execution of the Contract Works.
- f. The Contractor shall maintain records of all Contractor Personnel training and competency certificates.
- g. All Contractor Personnel working on Site shall attend the Site Specific EHS Induction.

### 6.1.5 Welfare and Sanitation and First Aid

- a. The Contractor and Ordering Party must ensure that there are enough welfare facilities (including toilet, sanitation, lockers, and, if necessary and depending on the site's configuration, eating facility, rest rooms, etc.) available for the number of Contractor Personnel that will be on Site.
  - The use of the Ordering Party's facilities will not be allowed without prior agreement from the Ordering Party. The Division of Work will define who is responsible for the installation and maintenance of such facilities.
- b. The Contractor shall ensure that Common First-Aid Facility will be available for limited first aid treatment

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of minor injuries or sickness, posing imminent danger to a person on Site.

- The Contractor shall ensure that a suitable number of trained first aiders are on Site as required by applicable Law, to provide immediate first aid to Contractor Personnel. Consideration shall be made to ensure enough first aid coverage for works outside normal working hours.

### 6.1.6 Zero Tolerance to Deviation

- a. PSM applies a Zero Tolerance to Deviation Policy in all high-risk activities, whose principles are:
  - Deviation to any EHS requirement cannot be tolerated;
  - In case of a deviation that could result in a severe EHS event, the concerned activity must be stopped immediately, an investigation must be conducted, and corrective/preventive measures must be implemented;
  - Individual disciplinary measures may be applied where it is found through investigation that an EHS requirement has been breached, based on the “three-strike rule” (verbal warning, written warning and exclusion from Site). Deliberate breaches of requirements in relation to High-Risk Activities may require stronger and quicker disciplinary measures.
- b. The Contractor is responsible for applying those principles to the Contract Works and must ensure that their Personnel understand them.
- c. The Ordering Party remains entitled to request the Contractor to remove from Site any person and/or plant, materials, tools or equipment that is not conforming to the EHS Requirements.

### 6.1.7 Audits and Inspections

- a. The Ordering Party reserves the right to carry out or have carried out by a third party any audits and/or inspections it considers necessary during the contract duration. These audits may take place at the Site or, where relevant, on the premises of the Ordering Party or the Contractor.
- b. The Contractors shall also undertake regular audits and inspections of its own activities on site at a frequency defined in the Contractor Risk Control Plan.
- c. Any deficiencies found in the Contractor's management of EHS matters and any deviation to the EHS Requirements shall be immediately rectified by the Contractor at the Contractor's cost.
- d. An ordering party appointed supervisor might supervise all high-risk activities performed by the contractor. The appointed supervisor will perform daily documented inspections of the work site and enforce the Zero Tolerance Policy when required.

### 6.1.8 EHS Event Reporting

- a. The Contractor shall **immediately** notify the Ordering Party of any environmental incident, injury, illness, near-miss, unsafe condition or practice, and any loss or damage to the Ordering Party property, environment including incidents related to the Contractor Personnel.
  - Containment actions shall be taken immediately.
  - Preliminary investigation report assessing the potential root causes shall be submitted to the Ordering Party within 1 day.
  - Final Root Cause analysis, corrective action and preventative actions shall be submitted to the Ordering Party by the Contractor within 5 days except if defined differently by the ordering party.
  - This report shall be done using the Ordering Party forms unless otherwise agreed by the Ordering Party in writing.

### 6.1.9 Emergency Response Procedures

- a. The Contractor shall ensure that all Contractor Personnel are made aware of the Site-Specific Emergency

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Response Procedures and Evacuation Muster Points.

- b. The Contractor shall contribute to the organization of the overall emergency arrangements, to ensure suitable evacuation and roll call of Contractor Personnel in case of evacuation.
- c. In any case, the Contractor remains fully responsible for the management of their Personnel (and their own Contractor Personnel) and particularly during site emergencies and/or site evacuations. Particularly the Contractor must have a system in place to account for their Personnel during a site emergency/site evacuation.
- d. The Ordering Party remains responsible for the availability of relevant emergency infrastructure and facilities (emergency exits, escape lighting, fire extinguisher, Automatic External Defibrillator... etc.).

### 6.2 General Occupational, Health and Safety Requirements

#### 6.2.1 Personal Protective Equipment (PPE)

- a. The Contractor shall ensure at their own cost that each member of Contractor Personnel is provided with the correct Personal Protective Equipment or clothing for the Contract Works to be carried out, including but not limited to safety shoes, safety helmets, long pants, long sleeved shirt, gloves, aprons, high visibility clothing, masks, safety glasses, goggles, ear plugs, double lanyard safety harnesses, etc., as may be required by risk assessment and Ordering Party.
- b. All PPE used shall always be in accordance with recognized standards and the Law.
- c. The Contractor shall ensure that all PPE have been properly assessed for suitability, are maintained and stored properly and are provided with instructions on safe use.
- d. The Contractor shall monitor correct use of PPE by their Personnel.

#### 6.2.2 Housekeeping

- a. The Contractor shall ensure that their work area is kept clean, tidy and free from debris generated by their activities.
- b. The work areas must be cleaned daily and a full cleaning session of each area shall be conducted on a weekly basis. The disposal of all waste shall be performed as agreed, between the Contractor and the Ordering Party.
- c. All equipment, materials and vehicles shall be stored in an orderly manner.
- d. Access to emergency equipment, exits, telephones, safety showers, eye wash stations, fire extinguishers, pull boxes, fire hoses, etc. shall not be blocked or otherwise disturbed, restricted or delayed.
- e. Each Contractor shall perform Contract Work in a manner that will minimize and control the production and migration of noise, dust and debris to adjacent work areas.

#### 6.2.3 Confined Spaces

- a. All Confined Spaces belonging to Contractor shall be identified as either: Permit-Required or Non-Permit Required confined spaces.
  - Permit-Required Confined Spaces shall be clearly posted with the Permitted-Required Confined Space sign, forbidden entry to unauthorized personnel.
- b. A method for preventing entry must be established and maintained for all Confined Spaces. Physical prevention system (such as chains and locks) is preferred.
- c. Before commencing contracted work in a Permit-Required Confined Space at the Site, the Contractor must obtain a Confined Space Entry Permit from the Ordering Party.
- d. Atmospheric testing shall be carried out initially (by the Contractor, or as specified in contract's DOA), to determine presence for hazardous atmosphere (e. g. oxygen concentration, flammable substances, toxic gases (CO, CO<sub>2</sub>, SO<sub>2</sub>, H<sub>2</sub>S) and/or harmful physical agents.

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- e. The results of atmospheric testing shall be recorded on the Confined Space Entry Permit, as well as the atmospheric testing frequency (before starting work, during work and after work).
  - Adequate ventilation and/or other controls measures shall establish, if atmospheric testing indicate presence of hazardous atmosphere.

### 6.2.3.1 Requirements for entry into a Permit-Required Confined Space

The following requirements shall be met for entry to a Permit-Required Confined Space:

- a. Only competent and trained workers (Attendants, Entrants and Confined Space Supervisor) can participate to work in Permit-Required Confined Spaces (as a minimum as per local Law).
- b. A Confined Space Entry Log (or equivalent) must be used to identify the person inside the Confined Space at any time;
- c. The completed Confined Space Entry Permit shall be posted near the space entrance point for review.
- d. Attendant(s) are required.
- e. Communication must be maintained between the attendant and entrants to enable the attendant to monitor entrant status.
- f. Entrants must use equipment specified on the permit accordingly.
- g. Entrants must evacuate the space upon orders of the attendant or entry supervisor, when an alarm is sounded, or when a prohibited condition or dangerous situation is recognized.
- h. Entrants and attendants must inform the entry supervisor of any hazards confronted or created in the space, or any problems encountered during entry.
- i. Adequate emergency provisions must be in place. In particular, the necessary rescue equipment must be ready, pre-inspected and available. The arrangements need to be suitable and enough for the rescue of persons in the event of an emergency.

## 6.3 Material, Machinery/Machine, Equipment and Tools

- a. The Ordering Party shall be entitled to request the Contractor to remove from Site any materials, machinery/machine, tools or equipment that the Ordering Party considers to be unsafe or not conforming to the EHS Requirements.
  - Any such materials, tools or equipment shall not be permitted to return or be brought back to Site (as the case may be) without the prior written approval of the Ordering Party.
  - The Ordering Party shall not be held responsible for any delays and additional costs due to such situations.
- b. The Contractor must ensure that all Machinery, Equipment and Tools provided for use in connection with the Contract Works are:
  - Compliant with EHS requirements, suitable and safe for use, maintained in a safe condition and where necessary inspected to ensure this remains the case
  - Used only by people who have received adequate information, instruction and training and, if required, permits. The check of competences shall be done formally and prior to placement by the Contractor for any work on Machine
  - Prevented from access to dangerous parts of the Machine by ensuring safeguarding means are in place. Removing or bridging primary or secondary safeguarding is strictly forbidden at any time during normal intervention.
  - Always equipped with ground fault circuit interrupters (GFCIs) when using electric power leads. Use of electrical tape for temporary repairs is prohibited
- c. Where relevant, Residual Current Devices (RCDs) shall be in place at the power supply (for 240 volts and above) of the Multiple Distribution Boards.
- d. When changing tools, adjusting, setting up or cleaning a machine, the operator must switch off the

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automatic mode, lock the system with key off, or use devices such as a remote-control box with a non-latching ON switch.

- e. Powered hand tools shall be:
  - Grounded (earthed) or double insulated. Electrical cord must be in good condition and whenever necessary, waterproof connectors shall be used for cable connections.
  - Provided with a non-latching ON switch. This switch is not to be bypassed. When reenergized, no machine or portable tools and equipment will be allowed to start by itself.
  - Inspected prior use.
- f. When changing tools, adjusting, setting up or cleaning a Power portable tool, the operator must unplug the tool.
- g. It must be ensured that the preventive maintenance program of the Machine includes periodical checks of Machine and Equipment conditions.
- h. Portable circular saws, grinders and magnetic drilling machines must be provided with safeguarding round movable parts.

### 6.4 Vehicles Movement

- a. The Contractor shall ensure all vehicles used by the Contractor and/or their own contractors for carrying out the works, comply in every respect with all applicable Laws, and EHS Requirements to traffic, vehicle loading and unloading, parking. Any vehicle that is not in possession of current valid documentation and certificates shall be immediately removed from Site.
- b. All persons driving on Site shall obey all traffic regulations and signs. They must be subject to formal competence check by the Contractor to ensure the necessary training, experience and qualification prior to placement, and carry a valid driver's license for any vehicles they operate.
- c. Pedestrians shall respect Site Rules at any time. High visibility clothing/garments are mandatory as a minimum by vehicle drivers and in construction, forklift and truck maneuvering areas.
- d. Where there is no physical segregation of work traffic (logistic areas, construction sites...), all people not directly involved in the work of the operating vehicle shall maintain a safety distance of at least 2 meters from the vehicle.
- e. When a powered vehicle is not in use, it must be ensured that:
  - The engine is stopped and prevented from unauthorized use (e.g.: starter key removed), brake applied, brake applied (and with wheels chocked for heavy vehicles);
  - All raised parts are lowered to the ground (like forks) or put in a safe position (cranes);
  - No parked vehicle is obstructing emergency exits, other routes, fire equipment or electricity panels.

### 6.5 Working at Height

- a. The Contractor must ensure that all persons working at height, supervising Work at Height activities or are involved in designing fall prevention or fall protection measures are fully trained, qualified and competent prior to commencing work.
- b. Whenever reasonably practical, collective fall prevention measures must be in place (e.g. scaffolding, railings...).
- c. All persons exposed to a risk of falling from heights must use personal fall arrest systems (PFASs).
- d. The Contractor shall ensure a rescue plan is in place for Contractor Personnel working at height.
- e. Where safe to do so, all items used for work at height including tools and equipment must be secured, where this is not possible alternative measures such as barriers must be in place to prevent people from being in an area where there is a risk of falling objects or equipment.
- f. The Contractor must ensure that a competent operational supervisor is formally appointed to supervise each



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work activity where there is a risk of falling from height.

- g. All temporary floor openings must be physically secured to prevent falls.

### 6.5.1 Floor & Wall Openings

#### 6.5.1.1 Floor Opening/Holes

- a. All floor openings/holes where a person could fall must be either:
  - o Covered using materials strong enough to support any force that it may be subjected to and labelled with a sign indicating "Hole" or "Opening" on the top side, labels must be secured against accidental displacement.
  - o Protected/ guarded by standard guardrails and toe boards.
- b. At no time will any hole be left without protection.
- c. All covers must be installed to eliminate any tripping hazard and immediately replaced if damaged.
- d. All areas where floor covers are being installed must be secured to prevent persons not involved in the works from entering the area.

#### 6.5.1.2 Wall Openings:

- a. Wall openings shall be guarded by handrails and toe boards.
- b. Every opening above or adjacent to dangerous equipment or similar hazards must be guarded with a standard railing and toe board. A
- c. Fall Restrain or Personal Fall Arrest System (PFAS) is required if a guardrail system or hole covers are not installed for holes, floor openings, floor grating removal, and wall openings.

### 6.5.2 Roof Work/Access

- a. Roof Work and Access to roofs must not be undertaken without prior authorization from the Ordering Party.
- b. All roof openings (including temporary ones) must be physically secured to prevent falls.

### 6.5.3 Overhead Work

- a. A secure exclusion zone shall be maintained by the Contractor below overhead work to prevent access and protect Personnel from falling objects.
- b. Such exclusion zone shall be maintained until the end of the task.
- c. Suitable signage shall be in place to inform about the reason of the exclusion zone.

### 6.5.4 Working at Height Equipment

#### 6.5.4.1 Personal fall arrest systems (PFAS)

- a. PFAS shall consist of:
  - Anchorage point / anchorage
  - Body harness (full)
  - Connectors (e.g. 6' lanyard with deceleration device, self-retracting lifeline (SRL))
  - Descent/rescue devices
- b. PFAS components must be marked by the manufacturer with pertinent information relating to equipment safety, such as warnings, serial/model number, capacity, and the materials used to make the component. If marking is not legible, equipment must be removed from service.
- c. Only 4-point suspension harness and shock absorbing lanyards or SRL shall be used.
- d. Lanyards shall be equipped with locking snap hooks.
- e. All harnesses shall be properly fitted and worn.

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- f. Swing distance shall be considered when selecting connection points and lanyard or tether length.
- g. Specifically, engineered slings and or chokers used to provide anchor points for lanyards shall not extend the fall distance beyond 6 ft.
- h. Lanyards/ SRL must be attached by locking snap hook to the harness D ring in the center of the wearers back.
- i. Fall protection anchor points shall be:
  - capable of sustaining 5,000 lbs. per person attached.
  - located at or above the shoulders to minimize or eliminate “swing” in the event of a fall.
  - identified and installed prior lifting and setting equipment in place.
  - positioned to allow employees to immediately connect fall protection equipment without unprotected travel from anchorage point to anchorage point
- j. PFAS shall be inspected before use and every twelve months by the Contractor’s Competent Person
- k. Records of inspections shall be maintained and may be requested by the Ordering Party.
- l. Damaged or defective equipment shall be tagged and removed from service or destroyed and disposed.

### 6.5.4.2 Scaffolding

- a. All costs associated with scaffolding shall be borne by the Contractor.
- b. The Contractor shall submit for the Ordering Party approval a proposal regarding the type of scaffold to be used on site. The Ordering Party reserves the right to reject the introduction on Site of scaffold material not compliant to EHS requirements.
- c. The Contractor shall not erect any scaffold before the Ordering Party authorization.

#### 6.5.4.2.1 Scaffolds EHS Requirements

- a. Only qualified scaffolders are allowed to design, erect, alter, inspect and dismantle scaffolding.
- b. Scaffolds must be constructed with metal frames, using floorboards and toe-boards fixed at all times, with no significant gaps that could allow people to trip or fall.
- c. Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms.
- d. Scaffolds shall be provided with an access ladder or equivalent safe access.
- e. Climbing on handrails, mid-rails, and brace members is prohibited.
- f. When freestanding, manually propelled scaffolds are used, the highest work platform shall not exceed three (3) times the minimum base dimension. Contractor Personnel shall not be present on mobile scaffolds when they are being moved.
- g. A personal fall arrest system shall be used during the construction, alteration, dismantling of a scaffold and while working from an incomplete (e.g. missing guardrail) scaffold.
- h. All scaffold shall be plum and squared.
- i. Precautions shall be provided to protect employees from vehicular and or construction traffic while entering or exiting an access ladder or stairway.
- j. Scaffolding shall be protected from vehicular and / or construction vehicle traffic. When working on more than one level of a scaffold at the same time, each level above the working platform shall be completely planked to protect the lower working platform and debris netting will be installed to prevent material from falling to the lower level.
- k. Area below the scaffold must be barricaded to prevent accidental entry below the work area.
- l. Pedestrian traffic and / or a walkway area, adjacent to a scaffold shall be protected by installing a one-half inch wire mesh at each working platform. The mesh shall be placed between the handrails and secured to the toe board. Where pedestrian traffic must pass beneath the scaffold, full decking is required to protect the traffic path.
- m. Open flame burning and or welding shall not be permitted on wood scaffolding unless provisions are



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- made to protect against the risk of fire on the scaffold or scaffolding material and the immediate area.
- n. Platforms that are covered or partially covered with snow, ice, water, oil, or other slippery material shall not be used until the material is cleared. The distribution of rock salt to melt snow or ice is not acceptable as it can corrode the scaffolding and creates a slipping hazard.
  - o. Airlines, welding lines, tag lines, etc., shall not be tied off to the scaffold.
  - p. Scaffold frame members shall not be used for the purpose of rigging or hoisting. The installation of an approved hoisting device is required.
  - q. Tools, materials and equipment shall not be thrown off the scaffold or dropped to ground level.
  - r. Perry or Baker scaffold will not be erected beyond one stage without outriggers.
  - s. All scaffolds shall be subject to a documented inspection by a competent person (employed by the Contractor) and clearly identified/marked prior to use and thereafter every seven (7) calendar days (minimum), immediately after any modification or immediately after any adverse weather conditions.
    - a. Green/red scaff tag system shall be used to identify safe / unsafe scaffold for access.

### 6.5.4.3 Stairways and Ladders

- a. Fixed and portable ladders must only be used as an access to, or egress from a workplace, and when the use of alternative equipment is not practicable.
- b. When used, ladders must comply with the following requirements:
  - Self-fabricated ladders are prohibited
  - Conductive or metal ladders shall be prominently marked as conductive and not be used near energized lines or equipment
  - Straight and extension ladders will be secured top and bottom to keep them from shifting, slipping, being knocked or blown over.
  - Ladders will never be tied to facility services piping, conduits, or ventilation ducting
  - All ladders used by workers must meet local legal requirements (i.e. OSHA/ANSI specifications for U.S.).
  - Ladders must be in good condition and not painted.
  - Ladders shall be rated for a minimum working weight of 250 pounds. The combined weight of the user and tools shall not exceed the rating.
  - Ladders must be used only for the purpose for which they were designed and shall not be loaded beyond their rated capacity.
  - User shall always face the ladder and maintain 3 points of contact while on a ladder.
  - Only one person at a time shall climb on or work from an individual ladder.
  - User must use both hands to climb; use rope to raise and lower equipment and materials.
  - Ladders shall not be moved, shifted, or extended while in use.
  - Ladders shall not be placed where they can block or obstruct or be struck by doors.
  - The ladder feet shall be covered with a slip resistant material and free of oil.
  - The ladder shall be positioned close to work.
  - The user shall avoid reaching out too far - keep belt buckle between side rails of the ladder.
  - Materials and tools shall not be stored on ladders.
  - Ladders that may be displaced by work activities or traffic must be secured or barricaded.
  - Temporary ladders will be lowered and securely stored at the end of each workday.
  - Portable ladders must be installed at an angle of 4-1, e.g. 1 unit out for every 4 units up, and must extend 3 ft. above the working platform
  - Ladders shall be visually inspected prior use and by a competent Contractor Person annually.
  - All defective ladders shall be tagged and/or removed from service immediately.

### 6.5.4.4 Mobile Elevated Work Platforms (MEWP)

Mobile Elevated Work Platforms (aerial lifts, scissors lifts, bucket trucks, etc.) shall be used in accordance with

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the EHS Requirements, as described below.

- a. Equipment must only be operated by trained and qualified workers.
- b. Equipment must be clearly marked with the rated lifting capacity
- c. Operators shall ensure all persons and property are clear before operating.
- d. Before moving equipment, operators shall sound horn or alarm, all equipment shall be equipped with a working and audible back up alarm.
- e. Operators must ensure the following prior to operation:
  - the MEWP is levelled and on firm surfaces
  - hazards associated with power lines are appropriately controlled
  - the MEWP will not create a hazard, e.g. the boom will not swing out into the path of other vehicles
  - the MEWP will not be overloaded or used as a crane
- f. Personal Fall Arrest System (PFAS) must always be used and connected while in MEWP.
- g. Tying off PFAS to an adjacent pole, structure, or other equipment is prohibited.
- h. All lifting platforms must have a basket or work platform containing guard rail protection.
- i. Employees shall always stand firmly on the floor of the basket and shall not sit or climb on the edge of the basket.
- j. Stabilizers, if present, must be operational, extended, and locked in position.
- k. Where unstable soil or surface is present, pads must be placed beneath the stabilizers.
- l. Operators must have access to the manufacturer's instruction manual or equivalent.
- m. Visual inspection and operational checks must be performed prior to use, each shift.
- n. Inspection must cover the following:
  - Work area: the work area shall be inspected to ensure that conditions are safe to operate. Operators must ensure that pedestrian traffic has been diverted
  - Equipment: brakes, power source (battery or fuel), hydraulic lines, etc....
  - Any other items described in the Pre-Use and/or the manufacturer's Operators Safety Manual

### 6.6 Lifting Operations

- a. The Contractor shall prepare a lifting plan and submit it for authorization by the Contractor's competent authorized persons prior to any lifting operation and formally communicated to all persons undertaking the work.
- b. All persons preparing, issuing lifting plans and all persons involved in lifting operations must be subject to formal training, be qualified and competent. The Contractor must ensure that their nominated Lifting Supervisor and Coordinator have appropriate qualifications.
- c. The Contractor lifting plan shall include:
  - Ordering Party general or site specific EHS documentation related to lifting operations
  - The lifting methodology, step by step
  - The risk assessment of the operation including consideration for weather conditions and work environments (e.g.: proximity of hazards and obstructions to the load, consideration for overturning, load integrity) where appropriate and consideration for simultaneous operations and the measures taken to avoid conflicting tasks in the lifting area
  - The identification of the designated lifting area, the fall zone and the control measures to prevent access such as barriers, signs, etc.
  - The description of the type, weight, size, shape and center of gravity of the load and the method used for slinging, attaching and detaching the load with the availability of approved lifting points on load when necessary
  - The list of the certified and inspected equipment and lifting accessories to be used

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- The composition of the team required to perform the task (lifting supervisor, crane operator, slinger, rigger, signaler etc.) with the needed qualifications and description of their roles and responsibilities including the intended communication method
- d. The Contractor must ensure that a competent operational leader is formally appointed to supervise each lifting operation.
- e. Clear communication channels must be formally established and maintained between everyone involved in a lift with only authorized person giving instruction to the operator.
- f. No employee of the Contractor shall be positioned under a suspended load or between a suspended load and fixed objects.
- g. Overloading of lifting equipment and/or accessories is forbidden.
- h. Lifting accessories must be handled and stored to prevent damage and deterioration (hung, cleaned after used, away from direct sunlight and chemicals).
- i. All lifting equipment and accessories must have valid manufacturers certificates or thorough examination records and be uniquely identified, marked with the safe working load, listed in a register and subject to formal regular inspection and shall have valid certificates from a competent authority.
- j. Inspection before use by the operator is mandatory.
- k. The Contractor shall operate and maintain cranes and hoisting equipment in accordance with manufacturers' specifications and limitations, and the EHS Requirements.
- l. All defective, non-inspected or unidentified (safe working load / identification number) lifting equipment or accessories must be either removed from site or physically prevented from use.
- m. Contractor Personnel are not permitted to use the Ordering Party lifting equipment unless prior approval has been received from the Ordering Party.

### 6.7 Lockout Tagout (“LOTO”)

- a. Prior to performing work on machines or equipment(s), the Contractor **shall ensure that all energy sources are isolated and verify the absence of residual energy** (e.g.: by using specific voltage detecting device for electricity).
- b. At any time, the Contractor shall follow the Site-specific LOTO rules.
- c. The Contractor must ensure that all their affected Contractor Personnel receive the necessary training.
- d. When the Contractor oversees LOTO, each authorized person must be issued with an individual lock with a unique key. It is the responsibility of the Contractor to deliver each person under its management with such lock and key and other devices (such as lock box) in order to comply with the PSM standard “One person, one Key”. The Contractor shall secure areas where energy sources have been de-energized, to prevent the access of unauthorized personnel and erect suitable signs. All affected Personnel shall be notified.
- e. Once an item of electrical equipment has been energized, an item of mechanical plant and/or System has been erected and released for Commissioning, no work will be allowed on such item of Equipment or System unless a valid Permit to Work (PTW) has been obtained from the relevant authority.

### 6.8 Hazardous Substances

- a. The list of chemicals brought onto the Site by the Contractor (including fuels, oils, lubricants, chemicals, paints, coatings, coolants, cleaners, flooring materials, etc.) shall be communicated by the Contractor to the Ordering Party.
- b. The introduction of certain chemicals on Site may be subject to rejection by the Ordering Party.
- c. Up-to-date Safety Data Sheets (SDS) for all chemicals brought on site must be available to the Ordering Party at the Site.
- d. Contractor Personnel shall be made aware of the hazards associated with the chemicals being used.

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- e. All chemicals brought onto the Site by the Contractor must be properly labelled, stored and segregated to prevent potential hazardous mixing.
- f. All hazardous substances must be used and stored by the Contractor in compliance with the requirements described in the Safety Data Sheet.
- g. Transferring of flammable liquids shall be grounded and bonded.
- h. Temperature sensitivity needs to be taken into consideration during storage period.
- i. Expired chemicals and waste shall be disposed of in accordance with legal requirements and contract's T&Cs.
- j. Upon completion of the Contract, all unused materials shall be removed from the Site by the Contractor.

### 6.9 Asbestos-Containing Materials

- a. The Contractor shall not bring any Asbestos or Asbestos containing material onto the Site.
- b. Upon discovery of unanticipated or suspected asbestos containing materials the Contractor shall immediately report to the Ordering Party and shall halt all work in the area until formal notification from the Ordering Party is received.

### 6.10 Compressed Gas Cylinders

- a. Gas cylinders shall be securely transported, stored, identified and used in line with the EHS Requirements.
- b. Hose lines shall be adequately protected, inspected and tested for leaks in line with the EHS Requirements.

### 6.11 Electrical Safety

- a. Personal authorization must be issued by Contractor Management (or formally designed delegates) likely to perform or supervise electrical works.
- b. Prior to starting work, on the request of the Ordering Party, the contractor must be able to present all the evidences used for issuing such authorization.
- c. The Ordering Party shall not be held responsible for delays and additional costs due to late submission of the requested evidences. Without such an authorization, no Contractor's employee shall undertake electrical works.
- d. No live work on high voltage or medium voltage is allowed.
- e. All high voltage and medium voltage electrical works must be performed on isolated equipment (locked out /tagout) and only after verification of absence of voltage with suitable equipment.
- f. Low voltage and very low voltage live work is only allowed for measurement tests and checks of equipment. The below measures will be taken:
  - Work practices must protect against direct or indirect body contact by means of tools or materials and be suitable for work conditions and the exposed voltage level
- g. A Lockout and Tagout procedure must be applied prior to commencing any electrical work. Prior to commencing works on isolated equipment, a verification of absence of voltage with suitable safety test equipment must be performed.
- g. Energized panels will remain locked with a specific key or tool whenever they are unattended and tagged with the signs and warnings indicating the presence of danger. If not reasonably practicable, a restricted area delimited with physical barriers and supported by warning signs must be implemented around the opened equipment.
- h. Only qualified electrical Contractor Personnel may :
  - enter high voltage areas, substations and/or transformer vaults and only after being specifically authorized by the Ordering Party.

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- perform electrical work or supervise electrical work.
- i. Proper illumination shall be provided before entering any area containing exposed energized conductors.
- j. Do not tamper with electrical wiring and equipment shall not be tampered with. All electrical wiring and equipment must be considered energized until lockout/tagout procedures are implemented.
- k. Damaged or defective electrical equipment shall not be used. They must be tagged and removed from service immediately.
- l. All 120 V 15/20 A temporary wiring (e.g. extension cords) must:
  - Have Ground Fault Circuit Interrupter (GFCI) protection for personnel when used during construction, maintenance, remodeling or repair activities.
  - Be equipped with third-wire grounding.
  - Be covered, elevated, or protected from damage when passing through work areas.
  - Be protected from pinching if routed through doorways.
  - Not be “daisy chained.”
  - Not be fastened with staples, hung from nails, or suspended with wire.
- m. Temporary lights shall not be suspended by their electric cord unless designed for suspension. Lights shall be protected from accidental contact or breakage.
- n. All electrical equipment, tools, switches, and outlets shall be protected from environmental elements.
- o. Conductive jewelry and clothing (e.g. watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) shall not be worn when working on or near exposed energized parts.
- p. Contractor’s generators shall be grounded in accordance with manufacturer’s instructions

### 6.12 Fire Protection and Prevention

- a. Routine hot works should be described in the Contractor’s Risk Assessment.
- b. Full and unrestricted access to emergency exits, fire-fighting equipment, fire control and emergency vehicles shall always be maintained .
- c. The Contractor shall provide, install and maintain their own temporary fire protection against hazards they introduce to the Site (work areas, storage areas, and temporary facilities under their responsibilities).
- d. Contractor fire extinguishers shall be inspected at least annually by a certified person and visually inspected monthly and documented by the Contractor.
- e. The Contractor shall not install or alter fire prevention/protection systems without the Ordering Party authorization.
- f. The Contractor and Contractor Personnel may only work on fire systems where appropriately licensed/qualified.

### 6.13 Trenching and Excavation

- a. The Contractor shall assign a competent Contractor Personnel for all trenching and excavation work.
- b. Excavation shall be planned around the most gradual safe slope for all the different soil types and layers encountered.
- c. For any excavation greater than 1.2 m (4 ft.) and where the width is 2/3 of the depth, at least one of the methods to prevent collapse or cave-ins is necessary:
  - Slopping - angling the sides of walls at an incline.
  - Benching – excavating one or a series of horizontal levels or steps (depending on the depth of the excavation) in the sides and ends of the excavation.
  - Shoring - supporting the sides and ends of the excavation using suitable trench supports, shuttering or piling

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- d. All excavations must be provided with safe access and egress located within 7 m (23 ft.) of all workers.
- e. Access and egress may be provided in the form of ladders, ramps or steps etc.
- f. Crossing Trenches:
  - Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.
  - Walkways or bridges must be provided for foot traffic
- g. A Permit to Work (PtW) must be established before commencing any excavation work, where any of the following risks have been identified:
  - Excavations within 5 m (16.4 ft.) of underground services (gas, electricity, water)
  - Excavations deeper than 1.5 m (5 ft.)
  - Excavations that may be deficient in oxygen or contain hazardous substances
  - Possibility of water entry
  - Presence of foundations close to the excavation or adjacent structures
  - Loose rock or soil (including soil previously excavated)
  - Presence of simultaneous operations
  - Possibility of flooding and cave-ins, considering the following potential events: tension cracks and relevant sliding.
- h. The table below describes the requirements for safety distance (SD) for barriers around the excavation area.

		Safety Distance (SD)	
		0 < SD < 1.5 m or 0 < SD < 5 ft.	SD > 1.5 m or SD > 5ft
Excavation depth	0.5 m to 1.2 m or 1.6 ft. to 4 ft.	Rigid barrier	Flexible Mesh or Visible Safety Chains
	>1.2 m or > 4 ft.	Rigid barriers and toe boards	Rigid barriers

- i. Material including spoil and backfill must not be stored within 1.2 m (4 ft.) of the edge of excavations
- j. Vehicles must not be allowed to come within 3 m (9.8 ft.) of an excavation unless working in connection with the excavation.
- k. It is prohibited to work on faces of sloped or benched excavations at levels above other workers, unless workers at lower levels are adequately protected from the hazard of falling, rolling or sliding material or equipment

## 7 ENVIRONMENTAL REQUIREMENTS

### 7.1 Waste Management

- a. The collection, transport, storage and removal of waste from the Site and the disposal as per applicable Law, and as described in contract's T&Cs are the full responsibility of the Contractor for any waste generated by the Contract works.
- b. The Contractor shall take all necessary precautions to ensure the complete protection of ground and underground against pollution.
- c. The burning of surplus waste shall not be permitted.



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- d. In the event that the Contractor fails to comply with the waste management requirements, the Ordering Party reserves the right to carry out the necessary work, and to recover the costs from the Contractor.

### 7.2 Spills prevention and control

- a. The Contractor shall take all steps and precautions necessary to ensure that no liquid waste, contaminated surface water, or other untreated effluent gains access to the surface water drainage system.
- b. All liquid waste resulting from the Contractor's activities on Site shall be collected separately with approved interceptors or similar, and disposed of, by the Contractor, in accordance with the applicable Laws.
- c. It is the Contractor's responsibility to identify all such laws and regulations regarding waste disposal and act in full compliance with such Laws and regulations.
- d. The Contractor shall hold the Ordering Party harmless from any such occurrences, whether they are accidental or otherwise.
- e. The Contractor is responsible for the provision of adequate spill kits/protection and the clean-up and disposal costs of spills arising from the Contract Works.

### 7.3 Emissions

- a. The Contractor shall identify and quantify any emission sources associated with the Contract Works.
- b. The Contractor shall implement controls to eliminate or minimize emissions which include but are not limited to Volatile Organic Compounds, noise, dust, fumes and vapors.
- c. Where practicable, screening shall be provided to prevent the ingress of dust and dirt to any part of the Contract Works.
- d. The Contractor shall ensure adequate dust suppression methods are always employed (e.g. wetting down by water truck) in their work areas .
- e. The Contractor is to prevent the deposit of mud on public roads by their vehicles and shall act in accordance with the applicable Laws and the EHS Requirements. The Contractor is responsible for maintaining all public roads free from mud generated at Site from whatever cause to the satisfaction of the Ordering Party.
- f. The Contractor shall provide to the Ordering Party upon request, and whenever specified by the EHS Requirements, any information, plan, measurement, analysis and control measures required to fulfil the EHS Requirements.

## 8 CONTRACTOR EHS INSPECTION AND REVIEW

- a. The Contractor may be required to participate in a Contractor EHS performance review covering the scope of the Contract Works.
- b. This activity involved undertaking a site inspection to check on EHS compliance and a review of the contractors EHS performance over the period since the previous report. **Appendix A : Contractor EHS Compliance Inspection**, Contractor EHS Compliance Inspection Form, may be used to facilitate inspections.
- c. The frequency shall be stipulated by the Ordering Party. The attachment to the present document or equivalent shall be used for this purpose.
- d. The results if this and any other inspection may be used in application of contractual remedies as outlined below.

## 9 REMEDIES FOR NON-COMPLIANCE WITH EHS REQUIREMENTS

- a. The Ordering Party will inform the Contractor whenever it considers the Contractor to be in breach of any of the EHS Requirements.

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- b. If the Contractor does not take appropriate corrective actions to rectify the breach within reasonable time or within the time period stipulated in the Ordering Party's written notice, the Ordering Party is entitled to rectify such breach itself or by a third party and to recover the associated costs from the Contractor.
- c. Whenever the breach of the EHS Requirements requires an interruption of the Contract Works (as stated in "Zero Tolerance to Deviation" (paragraph of the present document), the Contractor shall stop the work and shall remain liable for the cost and delay implication of such interruption, in addition to the additional rectify costs required to rectify the situation.
- d. In case of the occurrence of an accident due to breach of the EHS Requirements by the Contractor during Contract Works, the Contractor shall be liable for all losses, damages, fines and costs of responding to and participating in the investigations of any relevant authorities and defending any actions as a result of such breach and indemnify and hold harmless the Ordering Party in respect of the same.
- e. If the respective breach constitutes a material breach, the Ordering Party shall be entitled to terminate the Contract under the conditions of the Contract.
- f. Such termination right shall be cumulative to any other remedy available for such breach. A material breach of the EHS Requirements shall include but not be limited to a breach:
  - i. that may result in legal action against the Ordering Party or the Contractor;
  - ii. that may result in fines or alike being levied on the Ordering Party or the Contractor;
  - iii. whereby the Ordering Party or Contractor may lose its license, permit, certificate or alike necessary to execute their works or the Contract Works (as the case may be);
  - iv. that may lead to termination of the main contract entered by the Ordering Party and its customer;
  - v. where the Contractor persistently breaches EHS Requirements.



## EHS Requirements for Critical Contractors

### Appendix A : Contractor EHS Compliance Inspection

Contractor Company Name:		Site:	Inspection Date:	
Inspection Question	Satisfactory?(Check one)		Details of non-conformance	Comments
	YES	NO		
Valid risk assessments are in place for all contractor activities				
All contractor personnel checked had a valid identification system (e.g. badges) and have received induction training				
All lifting accessories checked were found to be correctly marked and inspected				
All contractor personnel checked performing electrical work are trained and authorized to do so				
All confined spaces activities checked had a confined space permit place				
All contractor personnel found working or walking on a scaffold had the scaffold tag green and the inspection in date				
No contractor personnel were observed working or walking under a suspended load				
All contractor excavations checked are protected with suitable barriers				
All contractor wastes checked are stored/placed in suitable containers				
<b>Ordering Party Site Manager's Name &amp; Company:</b>			<b>Ordering Party Site Manager Signature:</b>	
<b>Contractor Representative Name:</b>			<b>Contractors Representative Signature:</b>	