STEMulation Learning Safety Program

Rev. 1.0

SECTION 1: INTRODUCTION / GENERAL REQUIREMENTS / DEFINITIONS

STEMulation Learning Inc. (Company) strives to maintain a positive safety culture in addition to a safe and healthy workplace for employees and contractors. Contractors must report any unsafe work or environmental conditions which has or could have an adverse impact to human health or the environment. Contractors are to ensure the health and safety of their workers and any person likely to be affected by the workers actions. Contractors have the right to know about hazards and the means used to control or eliminate the hazards. Contractors have the right to participate in workplace safety activities and to refuse to work in an unsafe or environmentally detrimental condition. This document provides all contractors with the minimum Environmental, Health and Safety (EHS) standards required while working on and/or adjacent to Company premises. STEMulation Learning Inc. is committed to an operations management system (OMS) framework to direct and control work to achieve the Company's objectives in an intentional and continual manner. This document communicates OMS requirements applicable to Contractors. Non-compliance with safety and/or environmental requirements is treated the same as non-compliance with any contract provision, and may result in work stoppage or contractor removal from the premises. Willful or repeated non-compliance may result in contractor dismissal and contract termination.

The Company requires that Contractors:

- Meet all guidelines outlined in Sections 2.1 and 2.2, of this manual prior to commencing any work on Company premises.
- Ensures all workers are at least 18 years of age
- Contacts a Company Representative before proceeding if the standards in this manual are not clearly understood or if situations arise which are not covered by this manual.
- Maintain a positive safety culture

No Conduit: The Contractor has signed a contract containing an obligation to not disclose to any third party any confidential information regarding Company; which Contractor has obtained or creates as a result of performing the contract. Contractor shall review its contractual confidentiality obligation with its designated company representative and periodically inform workers and subcontractors of the requirements.

Within this manual all standard measurements are applicable in the US and the metric numbers are applicable in Canada.

NOTE: Consultants, Engineering Support, Minimal Risk Contractors, Temporary Labor, Visitors used in an office setting and/or escorted on project premises for general observation tasks are required to receive a general site safety orientation. The general site orientation includes elements such as; emergency procedures, PPE requirements and muster point locations.

NOTE: Unless otherwise specified by contract, contractors must supply all tools and equipment including but not limited to: portable monitoring equipment, safety equipment, communication tools, etc.

STEMulation Learning Inc. (STEM) employees and contractors are expected and encouraged to report to their supervisors or authorized company representative any actual or potential noncompliance with requirements, hazards, opportunities for improvement, and ethics concerns, including environmental concerns. STEMulation Learning Inc. also maintains an ethics hotline and designated high-level personnel for reporting of noncompliance, as follows:

STEM's Hotline — 810.691.9237 / Email – stemulation@kmtent.com

Contact Ethics and Environmental Compliance Officer (EO): Yusef Robinson

Contractor is ultimately responsible for determining regulatory applicability and assuring compliance.

General Definitions/Acronyms

ASSEMBLY AREA: A pre-determined location in which to assemble and conduct a roll call in case of an emergency evacuation.

AUTHORIZED EMPLOYEE: A person who locks out and/or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

CDL: Commercial Driver's License. Defined within the Federal Motor Carrier Safety Regulations

CMV: Commercial Motor Vehicle. Defined within the Federal Motor Carrier Safety Regulations

COMPANY: STEMulation Learning, Inc., STEMulation Learning Inc. partners, L.P. or any one of its' subsidiaries, affiliates and/or business units.

COMPANY REPRESENTATIVE: Any person contracted or assigned to perform short or long-term workplace inspections for the Company.

COMPETENT PERSON: A competent person is one who has been trained and is authorized by their employer to identify and implement prompt, correct actions to mitigate work site hazards.

CONTRACTOR: Any company or person contracted to perform short or long-term work for the Company. References to Contractor include Contractor's workers, subcontractors and third party inspectors and consultants.

DOT: U.S. Department of Transportation

HIRING MANAGER: Includes Project Manager (PM), Supervisor, Lead and / or Manager that is accountable for applying knowledge, skills, tools, resources, and techniques to all project activities, ensuring that project results meet stakeholder needs and expectations. With input from the Project Sponsor, the Project Team, and other stakeholders, the Hiring Manager maintains and controls all logistics/mechanics related to project completion.

NEAR MISS: An undesired event or a condition that, under slightly different circumstances, could have resulted in injury, damage or other loss.

NFPA: National Fire Protection Association

PREMISES: References to Premises includes; Company property, job site, job and worksite. Any real property on which Contractor will be working, whether owned by Company or not, including facilities, terminals, roads, parking lots, pipeline rights-of-way, common areas, compressor/pump station or offices.

REPORTABLE INCIDENT: Any act, incident, injury, occurrence, unwanted release of energy, unwanted release of product or near miss that is not considered a normal operating procedure and/or an occurrence that results in worker injury or monetary loss.

SOW (Scope of Work): Includes the purpose of a Project and Project Definition to reduce and ultimately eliminate ambiguity. Scope planning will demonstrate clear, detailed communication among the project stakeholders that results in a clearly defined project with little misinterpretation. Specific project tasks, critical dates, and quality control measures are identified during scope development and project definition.

WORK: Any and all services, acts, obligations, duties and responsibilities necessary to the successful completion of the project assigned to or undertaken by Contractor under the Contract Documents, including the furnishing of all labor, services, materials, equipment and other incidentals.

SECTION 2: CONTRACTOR SAFETY PROGRAM ADMINISTRATION

Contractors are expected to read this manual and to comply with Company requirements. The Company retains the right to question Contractors regarding the content of this Manual and to stop work if Contractors are observed operating in disregard to EHS requirements. The Company updates this document and applicable forms periodically. Contractors are advised to check the Company website for the most current Contractor Environmental / Safety Manual and forms.

The Company website can be located at: http://www.kmtent.com/work/co safety req.

2.1 PRE-JOB REQUIREMENTS

It is the Company's expectation that the Contractor uses satisfactory health and environmental safe practices throughout the duration of the project. If at any time the Contractor's status becomes unsatisfactory, the Contractor must work with the Company Hiring Manager to develop a plan for correcting deficiencies and timelines for completion.

At any time during the job, an Environmental, Health & Safety (EHS) desktop, or field audit may be performed. These audits will be performed as determined by the Contractor Safety Department to verify the contractor's information, workman's compensation, safety culture, and safety compliance in the field. If any improvement opportunities are identified, the Contractor will be required to correct any deficiencies with timelines for completion. If the Contractor fails to meet the timelines, STEM shall have the right to remove the Contractor from the project. Once the audit has been completed, it will be available for review by other STEM hiring personnel. A third party auditor may also assist STEM with the coordination and completion of the contractor audits.

2.2 SAFETY ORIENTATION

After the project is awarded and prior to the start of work, the Contractor and applicable Company representatives must participate in a Safety Orientation which includes:

- A review of the Company EHS requirements, site specific hazards, abnormal operating conditions, emergency
 preparedness and response plans, restricted areas, security, potential hazards that may be encountered,
 evacuation procedures, assembly areas, safety systems and contractor access and parking requirements at the
 worksite. The Contractor is encouraged to ask questions during the orientation process.
- The contractor safety orientation must be documented with STEM. The Contractor must ensure that everyone
 that works on Company premises receives this orientation. The orientation is required annually or when
 changes to Project Scope of Work and/or the Contractor Environmental / Safety Manual occur.

- The Contractor Environmental / Safety Manual may be issued to each participant. At a minimum, the location of the Contractor Environmental / Safety Manual will be identified in the orientation.
- In addition, a separate site specific orientation may be required for Company operating facilities.
 Documentation must be kept by the facility utilizing one of the aforementioned methods or business unit specific process. As of July 1, 2017, every individual (working for a contractor [or subcontractor] must have a photo identification available upon request on any Company location or project. Visitors will not be granted entry without prior permission of Contractor or Company.

2.3 CONTRACTOR DUTIES AND RESPONSIBILITIES

Contractor must provide direct supervision of its subcontractors. The Contractor must have a Subcontractor Management Plan in place which has been approved through STEM. The Contractor may request to utilize STEM's form or equivalent to document evaluations of their subcontractors. The Contractor must submit the required subcontractor management and evaluation documentation to the Company Representative upon request.

2.4 DISCIPLINARY ACTION

If any Contractor requires, requests or allows workers to work in or around unsafe conditions or violates environmental permits or regulations, the Company may immediately remove the Contractor or any of its individual workers from Company premises and terminate the contract. For example, immediate and permanent removal may occur if any of the following activities are observed:

- A. Openly exhibits disregard, defiance, or disrespect for the safety program.
- B. Falsifying documents or information.
- C. Participates in fighting, violence, threats of violence, theft, or destruction of property.
- D. Violates established EHS laws, safety or environmental rules, regulations, procedures or codes.
- E. Possesses weapons such as firearms or knives not typically used in conjunction with normal work tasks.
- F. Failure to comply with Company Drug and Alcohol policies.

2.5 SITE/PROJECT HEALTH AND SAFETY PLANS (HASP)

Contractor may be required to develop a site/project specific Health and Safety Plan (HASP). If required, the HASP must establish the EHS expectations for the project, describe the key processes to be utilized during the project by the Contractor and assign areas of responsibility. Based on the detailed work plan, the Contractor must conduct a Hazard Evaluation to identify hazards anticipated during the project and measures that will be implemented to eliminate or control the hazards. The Contractor must include plans for changing conditions, revised SOW, or new information that will warrant modifications to the HASP. The original HASP and any modifications or changes must be submitted to the Company Representative for review prior to the start of work. Any revisions to the HASP will be returned to the Contractor for discussion or implementation. A project-wide HASP may be developed by the Company and may include site specific requirements not identified in this manual.

SECTION 3: ACCIDENT / INCIDENT REPORTING AND INVESTIGATION

- 3.1.1 The Contractor must immediately report all accidents/incidents and near misses to the Company Representative. If applicable, the Contractor must notify the appropriate regulatory agency within the required reporting requirements.
- 3.1.2 STEMulation Learning Inc. requires an incident investigation to either an immediate and/or root cause level depending on the severity of the incident [contact your Company Representative to determine the level of investigation required for your incident]. For incidents involving contractors, the root cause investigation conducted by the contractor can be relied upon, even if the root cause is not completed using SCAT. Immediate and root cause investigations will be documented using the company-approved incident tracking database, IMPACT, by completing fields that correspond to type of event, immediate cause and/or root cause on the SCAT Chart (or other).
- 3.1.3 A root cause investigation shall be completed when required by an agency, such as certain Process Safety Management (PSM) incidents, Risk Management Program (RMP) incidents, National Energy Board (NEB) reportable incidents, and Pipeline and Hazardous Materials Safety Administration (PHMSA) reportable incidents.
- 3.1.4 The Contractor must determine the necessary corrective actions and provide documentation of closure/completion in a timely manner, (all incidents). In addition to the Contractor's analysis/investigation, the Company retains the right to conduct their own investigation for any illnesses, injuries, fatalities, incidents or near misses occurring on its premises.
- 3.1.5 The Contractor must submit a copy of the written report and investigation, (using form CSM-001) to the Company Representative, unless otherwise specified, within 48 hours of occurrence.
- 3.1.6 Contractor must maintain injury logs for their respective workers. All incidents occurring on Company premises will be documented.
- 3.1.7 As determined by the Company, Contractor is required to supply total worker hours worked on Company projects/sites on a bi-weekly basis using form CSM-007, which is due by the 1st or the 15th of each month.
- 3.1.8 Unless otherwise specified by case-by-case concerns, all NON-WORK Related incidents (as defined by OSHA/OHS, etc.) are NOT REQUIRED to be reported.

SECTION 4: ALCOHOL, ILLEGAL DRUGS AND FIREARMS

4.1 GENERAL INFORMATION Contractor must develop and enforce a policy that prohibits the possession, distribution, promotion, manufacture, sale, use, and abuse of illegal drugs, drug paraphernalia, controlled substances, alcoholic beverages and weapons by workers while on Company premises. Unless state or local law provides otherwise, Contractors and guests, regardless of whether or not licensed to do so, may not carry or transport any firearm or weapon, whether or not concealed, at the workplace, on any Company owned or leased premises, Company-owned vehicle, or in any other vehicle while engaged in Company business.

- 4.2.1. Based on the Company business unit or regulatory requirements, and contractual obligations, the Contractor must establish and maintain acceptable Anti-Drug and Alcohol Misuse Programs.
- 4.2.2. Where required in the U.S., the National Compliance Management Systems (NCMS) will evaluate the Contractor's drug/alcohol programs. The plan must be submitted to NCMS for evaluation and approval by the Company. Contact NCMS at www.nationalcompliance.com
- 4.2.3. Contractor programs must include post-incident testing criteria. Examples of these criteria include but are not limited to:

- An event that involves the release of product
- Death or personal injury requiring inpatient hospitalization
- Explosion or fire
- Release of >5 gallons (19 liters) of hazardous substance or carbon dioxide
- · Accidents/Incidents involving vehicles and/or heavy equipment
- An event that results in a premises shutdown

4.2.4. CONTRACTOR WORKERS MUST BE TESTED WITHIN THE FOLLOWING TIMELINES:

- FOR ALCOHOL: Within 2 hours, but no later than 8 hours after the accident/incident
- FOR DRUGS: Within 32 hours of the accident/incident
- 4.2.5. If testing is conducted based upon suspicion, the Contractor worker under suspicion, must be removed from service pending test results.
- 4.2.6. Contractor workers are subject to searches including personal effects and automobile if located on the job site. Such searches may be conducted when there is a reasonable basis to suspect that the work performance or on-the-job behavior may have been affected by alcohol/drug use or that the Contractor has sold, purchased, used, or possessed illegal drugs or alcohol on the job site.

SECTION 5: ASBESTOS

5.1 GENERAL INFORMATION The potential of encountering Asbestos-Containing Material (ACM) while performing work on Company premises exists. The Company will identify those areas where ACM may be or is present, if known. All historical information pertaining to ACM for a premise is available for Contractor to review upon request.

5.2 KEY REQUIREMENTS

- 5.2.1 The Contractor must contact the Company Representative prior to removal of ACM. If required, the Contractor or Company must make any notifications to the applicable regulatory agencies a minimum of ten (10) business days prior to the removal.
- 5.2.2 Any Contractor who performs work where a potential for exposure to ACM exists must have a written ACM Compliance Program. The work plan must be available at the jobsite.
- 5.2.3 Work requiring ACM removal must be supervised by an individual who has received comprehensive abatement training. In the U.S., training must meet the EPA Model Accreditation Plan criteria. In Canada, training must meet the regulatory requirements of the Province where work is taking place. Training records and certificates must be documented and maintained by the Contractor. All training records and certificates must be readily available for review by the Company upon request.
- 5.2.4 To restrict emissions to adjacent areas, an enclosure must be constructed around an area from which the ACM is to be removed.

SECTION 6: CHAINS, SLINGS AND CABLES

6.1 GENERAL INFORMATION Defective or damaged chains, slings, cables or components must be tagged and removed from service immediately. Hooks, rings, links or any coupling device must have a rating equivalent or greater than the chain, sling or cable to which it is affixed. Never use makeshift links or coupling devices.

- 6.2.1 Contractor shall ensure all chain slings and cables are applicable for the job and are maintained and used according to the manufacturers' requirements.
- 6.2.2 Any alloy steel chain sling used for lifting must meet all applicable standards for selection, use and maintenance as outlined in ASME B30.9-2018 Chapter 9-1 and standard specification as prescribed under ASTM A906/A906M-02.
- 6.2.3 Daily inspections before use must be conducted and documented by Contractor to look for wear, abrasions, collapse and any other visible damage. Individual conducting the inspection must be designated as a competent person by the Contractor.
- 6.2.4 All chains, slings and cables must have an identification tag attached showing its load rating and limitations.

SECTION 7: CONFINED SPACE / CONFINED SPACE ENTRY PERMIT

7.1 GENERAL INFORMATION

- 7.1.1 A confined space is an enclosed area with a limited means of egress and may be subject to the accumulation of toxic or flammable substances, or an oxygen-deficient atmosphere. Confined Space means:
- A space that is large enough and so configured that a worker can bodily enter and perform assigned work
- Has limited or restricted means for entry or exit
- Is not designed for continuous worker occupancy
- 7.1.2 In the U.S. Permit Required Confined Space (permit space) means a confined space which has one or more of the following characteristics:

Contains or has the potential to contain a hazardous atmosphere

Contains a material that has the potential for engulfing an entrant

Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section or

Contains any other recognized serious safety or health hazard

7.2 KEY REQUIREMENTS

- 7.2.1. The Contractor is required to have a written Confined Space Entry Program which defines the roles and responsibilities for entry supervisor, attendant, entrant, fire watch, communications and emergency response and rescue for review by Company.
- 7.2.2. The Company shall treat all confined space areas as Permit Required Confined Spaces until proven otherwise utilizing Company re-classification checklist (re-classification not applicable in Canada).
- 7.2.3. A Contractor entering a Confined Space or Permit Required Confined Space must have the following:

Training in Confined Space or Permit Required Confined Space Entry;

A completed and posted written confined space permit at the entry location;

Ensure that all potential sources of toxic fumes and flammable vapors have been identified and isolated;

A trained attendant dedicated exclusively to those duties detailed in the Permit Required Confined Space procedure and is capable of initiating an emergency rescue.

A written plan for emergency rescue is required for any Permit Required Confined Space and must be approved by appropriate Company Representative.

- 7.2.4 Training must be completed by the Contractor and records and certificates must be documented and maintained by the Contractor and made available upon Company request.
- 7.2.5 A permit required confined space may be reclassified under the following conditions (not applicable in Canada):

If there are no actual or potential hazards within permit space.

Space may remain reclassified for as long as the hazards remain eliminated.

Hazards may be eliminated by use of energy control procedures for mechanical, but not electrical hazards.

The applicable Company re-classification checklist must be utilized and signed off by Competent Person reclassifying the space and Company Representative.

SECTION 8: EMERGENCY EVACUATION

8.1 GENERAL INFORMATION When required by the Company, the Contractor must develop a project specific Emergency Evacuation Plan, including the location of assembly areas and routes of evacuation. In the event of a fire or hazardous materials release, the Contractor and its personnel are to follow the direction of Company personnel unless otherwise directed by its Emergency Evacuation Plan and/or emergency personnel (e.g., fire department, police or other regulatory personnel).

8.2 KEY REQUIREMENTS

- 8.2.1. If Contractor suspects that an emergency condition exists, they must immediately contact the local authorities, as applicable (e.g., 911 or the particular emergency phone number in the area) and then the Company Representative.
- 8.2.2. Contractor must shut-off all equipment IF DOING SO DOES NOT POSE RISK OF INJURY.
- 8.2.3. Contractor must evacuate to the pre-determined assembly area by the safest available route.
- 8.2.4. The Contractor must account for all workers.
- 8.2.5. The Contractor must remain in the assembly areas until otherwise directed.

SECTION 9: FALL PROTECTION

9.1 GENERAL INFORMATION Contractors must review the job hazards and develop a Fall Protection Plan to address the hazards, and a Rescue Plan wherever personal fall arrest equipment is used.

- 9.2.1 Contractor must be protected from fall hazards of 4′ / 1.2m or more by guardrails or personal fall arrest systems. Personal fall arrest systems must be rigged so that the Contractor cannot free-fall more than 6′ / 1.8m or contact any hazardous point at a lower level. Positioning or fall prevention devices must be rigged to prevent free falls more than 2′ / 0.6m. See Section 35 for specific Scaffold fall prevention/protection requirements.
- 9.2.2 Full body harnesses, shock absorbing lanyards, and a proper attachment point are the minimum requirements for a personal fall arrest system. All fall protection devices must be properly stored, maintained and inspected for defects before each use. Harnesses, lifelines, retractable lifelines and lanyards must be

marked with a tag stating maximum load and name of the manufacturer. Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 lbs/ 2267 kg. All anchor points for fall arrest or restraint must meet minimum regulatory requirements and engineering design criteria for the weight. The Contractor is responsible for supplying all fall protection equipment required for their personnel.

- 9.2.3 The Contractor must provide a Competent Person to oversee fall protection compliance.
- 9.2.4 The Contractor must develop a written "Rescue Plan" wherever personal fall arrest equipment is used.

SECTION 10: FIRE PREVENTION AND PROTECTION

10.1 GENERAL INFORMATION

10.1.1 A Fire Watch is a designated individual who monitors the hot work site where open flames are present, work on in-service equipment is being performed, or sparks may land on adjacent in-service equipment. This individual must be capable of evaluating unsafe conditions and taking necessary actions to mitigate and communicate the conditions. The Fire Watch may not have other assigned duties while conducting this task.

10.2 KEY REQUIREMENTS

- 10.2.1 Firefighting equipment and a Fire Watch must be supplied by the Contractor and must be present during any hot work. Access to firefighting equipment must be maintained at all times and be inspected as required to ensure proper working condition.
- 10.2.2 Smoking and use of electronic cigarettes are allowed in designated areas only. Designated areas will be identified during the project pre-job construction meeting or work permitting process.
- 10.2.3 Matches or uncovered and trigger-type lighters are not allowed.
- 10.2.4 All non-intrinsically safe devices are permitted only in Company approved areas. Devices include, but are not limited to, cell phones, pagers and cameras.
- 10.2.5 Unless otherwise specified by the Authority Having Jurisdiction, (AHJ), all flammable and combustible liquids must be stored in metal enclosures and must be placed at least 3' (0.9m) away from other flammable storage cabinets. For Canada, portable storage containers for flammable liquids must meet either the Underwriter's Laboratories of Canada or Canadian Standards Association requirements.
- 10.2.6 Unless otherwise specified by the AHJ, the volume of Class I, Class II, and Class IIIA liquids stored within a single approved storage cabinet must not exceed 120 gallons / (454 L). 15.2.7 Unless otherwise specified by the AHJ, approved storage cabinets must be UL (Underwriters Laboratory) Listed or fire marshal approved for indoor storage of flammable or combustible liquids.

SECTION 11: FIRST AID/CPR & BLOOD-BORNE PATHOGENS

11.1 GENERAL INFORMATION

- 11.1.1. First aid is used for temporary treatment of on-the-job injuries and minimizes occupational exposure to hepatitis B virus (HBV), human immunodeficiency virus (HIV), and other blood-borne pathogens.
- 11.1.2. CPR (Cardio Pulmonary Resuscitation) is a lifesaving procedure that is performed when someone's breathing or heartbeat has stopped, as in cases of electric shock, drowning, or heart attack.

11.2 KEY REQUIREMENTS

11.2.1 Minimum first aid/CPR requirements for Contractors working at Company premises: The Contractor must have personnel trained and immediately available to provide first aid/CPR treatment on site. Contractor must

provide a current first aid/CPR certificate. The Contractor must have applicable first aid supplies at the premises. Contractor must develop an Emergency Plan for the premises and have it available at all times. The Emergency Plan must include, at a minimum:

- Location of the job site
- Name of hospital or Emergency Care Center where Contractor personnel would be transported
- Travel route
- A statement saying: "In Case of Serious Injury Call 911" or a specific number
- For remote premises, the Plan will include applicable transportation (e.g., helicopter services). 16.2.2 The following are the minimum requirements for Contractor working at Company premises who might be exposed to blood-borne pathogens:
- The Contractor personnel must be properly trained in basic blood-borne pathogen exposure, control and post-incident sanitation procedures.
- The Contractor must provide accessible blood-borne pathogen cleanup supplies.

SECTION 12: FLOORS, ROOFS AND WALL OPENINGS

12.1 GENERAL INFORMATION

- 12.1.1 The Contractor must prevent falls from roofs, wall and floor openings by ensuring proper safeguards are in place.
- 12.1.2 Guarding and covers should be removed only after other means of protection are in place. Contractor installing or removing guarding and covers must be protected by alternative means throughout the process.
- 12.1.3 Installation of a standard railing is required for floor perimeter and wall opening protection.

- 12.2.1 Wire rope used as top rail or/mid-rail must be $\frac{1}{2}$ " / 1.27cm in diameter with at least three J-type fist grip wire rope clamps at each connection and turn buckles every 100' / 30.4m. Use thimbles where the wire rope is connected.
- 12.2.2 For construction work performed on low sloped roofs (less than 4:12 pitch), or work areas within 25' / 7.6m of an unprotected edge, a warning line system may be used as alternative protection.
- 12.2.3 Stair railings must be constructed similar to a standard railing, but the vertical height must be 34-36" / 86.391.4cm from the top rail to the surface tread in line with the face of the riser, at the forward edge of the riser.
- 12.2.4 Floor opening covers must be used for openings greater than 2" / 5cm and capable of supporting the maximum intended load and installed to prevent accidental displacement.
- 12.2.5 During construction, Contractor must provide temporary stairs on structures that are two or more floors or more than 20' / 6.1m high until permanent stairways are in place.
- 12.2.6 Runways must be guarded by use of standard railing, or the equivalent, on open sides above the ground level. When tools, machine parts, or materials are likely to be used on the runway, provide a toe board on each exposed side.

13.1 GENERAL INFORMATION Contractor must establish and maintain a written, comprehensive Hazard Communication Program (HAZCOM/WHMIS). Hazard Communication Programs may differ between sites, areas, and business units. Contact the Company representative or the site safety representative for specific hazard communication concerns relevant to the location.

13.2 KEY REQUIREMENTS

- 13.2.1 Contractor must prepare a hazardous materials list before the materials arrive on site.
- 13.2.2 The use of hazardous materials on Company premises requires consultation with the Company.
- 13.2.3 Contractor must maintain the most current SDS sheets provided by manufacturers and distributors of the material.
- 13.2.4 Contractor must label all hazardous materials entering the premises. All labels must be intact and legible utilizing the new Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
- 13.2.5 Contractor shall inform personnel of the hazardous materials associated with the work they perform, and communicate hazards where work is being conducted.
- 13.2.6 Storage cabinets must be marked in conspicuous lettering: FLAMMABLE KEEP FIRE AWAY.
- 13.2.7 Unless otherwise specified by AHJ, regulations require that flammable and combustible liquids be stored:
 - In a quantity insufficient to produce an explosive atmosphere if inadvertently released.
 - More than 100' / 30.4m away from an underground shaft.
 - Away from the air intake of ventilation system, an internal combustion engine, or the fire box of a fired heater or furnace.
 - Only in containers approved to NFPA standards, CSA Standard B376-M1980 (R1998), "Portable Containers for Gasoline and other Petroleum Fuels" or ULC Standard C30-1995, "Containers, Safety".

SECTION 14: HAZARDOUS ATMOSPHERES

14.1 GENERAL INFORMATION A hazardous atmosphere is an atmospheric condition that may expose workers to a risk of death, incapacitation, and impairment of ability to escape unaided, injury or acute illness. Testing of hazardous areas is required prior to entry into an area of concern. Contractor shall not enter ANY area containing hazardous concentrations of toxic gases unless properly trained, protected, and utilizing calibrated air monitoring equipment.

- 14.2.1 All personnel working in a potential H2S environment must have certificates verifying proper training. Additionally, all personnel working in an H2S environment must be clean-shaven per the accepted practices governing SCBA (Self-Contained Breathing Apparatus) use. NOTE: A SCBA is required for H2S levels exceeding the permissible exposure limit: THE PERMISSIBLE EXPOSURE LIMITS (PEL) VARY IN U.S. AND CANADA. CHECK REGULATIONS FOR PEL LIMITS.
- 14.2.2 In areas where potential concentrations of Benzene and H2S may be present, applicable monitoring must be conducted using appropriate air monitoring equipment. Immediately exit the area if monitoring results are above the permissible exposure limit. Personnel must wear appropriate respiratory protection if concentration exceeds PEL. NOTE: THE PEL VARY IN US AND CANADA. CHECK REGULATIONS FOR PEL LIMITS.
- 14.2.3 Oxygen levels must be between 19.5% and 23.5% (U.S.) and 19.5% and 23% (Canada).

15.1 GENERAL INFORMATION Good housekeeping is mandatory. Work areas must be kept neat, clean, and orderly. If a Contractor's work area is not kept clean, the Company may have the area cleaned and charge the cost to the Contractor. The Company may also stop work until the area has been cleaned.

16.2 KEY REQUIREMENTS

- 16.2.1. Keep work areas, passageways, fire exits, fire lanes, and stairs in and around the buildings and structures clear of debris at all times.
- 16.2.2. Properly store all tools and equipment after use. Keep walkways free of dangerous depressions, obstructions, and debris.
- 16.2.3. Clean the work area daily and dispose of debris in dumpsters, or off site in accordance with the environmental requirements.
- 16.2.4 Contractor must remove all unused material and equipment upon the completion of the project.

SECTION 17: JOB HAZARD ANALYSIS

17.1 GENERAL INFORMATION Contractor must conduct a daily Job Hazard Analysis (JHA) and/or Safe Work Permit to identify Personal Protective Equipment (PPE) requirements, special equipment or operators and to develop controls for any potential hazards based on the daily job scope and work area.

17.2 KEY REQUIREMENTS

- 17.2.1 The JHA and/or Safe Work Permit must be documented and utilized on a daily basis and communicated at each daily tailgate meeting.
- 17.2.2 If the scope of work changes during the day, the Contractor must update the Job Hazard Analysis and/or Safe Work Permit and communicate these changes by conducting a tailgate meeting. If requested, Site Operations must be notified of all changes and updates.
- 17.2.3 Job Hazard Analysis and/or Safe Work Permits must be available for review and retained in the job file.

SECTION 18: LADDERS

18.1 GENERAL INFORMATION Ladders used on Company premises must meet appropriate guidelines. In the US, manufactured ladders must comply with ANSI specifications. In Canada, ladders must comply with CSA Standard Can 3-Z11-M81 (R2001) portable ladders, and ANSI Standard A14.5-2000 portable reinforced plastic ladders.

- 18.2.1 Metal ladders are prohibited for electrical work.
- 18.2.2 Stepladders must be fully opened when in use. Safety latches on extension ladders must be fully engaged.
- 18.2.3 Always face the ladder when climbing or descending. When working, face the ladder with both feet securely on the rungs. Never stand, step or sit on the top of the ladder, straddle the ladder, work on leaned stepladders, or work with two people on the same ladder.
- 18.2.4 The Contractor must ensure ladders are:

- Inspected before each use. Do not use ladders with broken or missing rungs, broken or split siderails, without legible load ratings, or damaged components.
- Defective ladders must be tagged out of service and removed from job site. Extend 3' / 0.9m above the upper landing surface.
- Secured to prevent slippage and workers must use the three point contact rule while working or climbing on a ladder
- The Contractor must use barricades or guards for areas impacted by ladder use. Areas include, but are not limited to, passageways and doorways.
- Ladders must meet maximum load ratings.

SECTION 19: LEAD IN CONSTRUCTION

19.1 GENERAL INFORMATION Company will identify and communicate to Contractor areas where lead may be present. Company Representative will advise on how to proceed.

19.2 KEY REQUIREMENTS

- 19.2.1. All Contractors who perform work where there is exposure to regulated levels of lead must have a written Lead Abatement Program.
- 19.2.2. All Contractor lead abatement workers must be adequately trained to understand the hazards associated with lead exposure. This includes the nature of operations that could expose them to lead, the purpose of medical surveillance, use of engineering work practices and appropriate PPE to minimize exposure.
- 19.2.3. Training records and certificates must be documented and maintained by the Contractor and made available to the Company upon request.

SECTION 20: LOCKOUT / TAGOUT (CONTROL OF HAZARDOUS ENERGY)

20.1 GENERAL INFORMATION

- 20.1.1 Guidelines and safeguards must be in place to protect Company and Contractor from unexpected startup or energy release.
- 20.1.2 Contractor shall Lockout and/or Tagout any energy isolating device when performing maintenance or service/repair of equipment. If an energy-isolating device is not capable of being locked out and a tag provides equal protection, tagout is acceptable.
- 20.1.3 Contractor shall supply all required materials, equipment and training for their workers to comply with this requirement. The Contractor shall discuss the proposed lock and tag locations with the Company Representative before they are allowed to proceed with their planned work.

20.2 KEY REQUIREMENTS

- 20.2.1 All Lockout/Tagout shall be coordinated with Company before working in an area of hazardous or stored energy.
- 20.2.2 The Contractor shall follow applicable JHA and/or Work Permit requirements before performing work.
- 20.2.3 The Contactor shall review and understand the Company's Lockout/Tagout procedures (O&M 152) and adhere to all warnings including.

Unauthorized removal of lockout/tagout devices is prohibited;

Unauthorized operation or servicing of equipment is prohibited.

- 20.2.4 Only the Contractor's authorized employees may service or perform maintenance on equipment where hazardous energy must be/is being controlled. Each authorized employee shall have personal Lockout/Tagout device(s), on the equipment or on a satellite lockbox over which they shall maintain exclusive control.
- 20.2.5 When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.
- 20.2.6 Contractor shall follow specific Company procedures (O&M's) when working on Company equipment. Contractor shall develop and follow their own Lockout/Tagout procedures prior to working on equipment during new construction.

SECTION 26: NOISE / HEARING PROTECTION

26.1 GENERAL INFORMATION Hearing protection must be worn in all areas where ear protection requirements are posted by the Company and/or the Contractor. Hearing protection is required at all times when operating or using any equipment emitting noise greater than 85 decibels.

SECTION 27: PERSONAL PROTECTIVE EQUIPMENT (PPE)

27.1 GENERAL INFORMATION Contractor must maintain a written PPE program and provide training in the proper use, maintenance and inspection of PPE PRIOR to beginning work. The daily JHA and/or Safe Work Permit must identify and specify any special or additional PPE requirements based on the scope of work to be conducted.

27.2 KEY REQUIREMENTS

- 27.2.1 The Contractor must supply all required PPE to its personnel.
- 27.2.2 Unless otherwise specified in a WHA (Workplace Hazard Assessment) and/or Company Business Unit requirement, the minimum PPE shall include
 - Hard hats [compliant with ANSI Z.89.1 and CSA Z94.1-05 and worn per manufactures instructions]
 - Safety glasses with side shields or side impact protection [compliant with ANSI Z87]
 - Safety toe shoes/boots (steel/composite toe or approved toe caps) [compliant with applicable ASTM and ANSI standards].
 - Additional PPE may be required by some business units and could include
 - o Fire Retardant Clothing
 - High Visibility Clothing
 - o Reflective Clothing
 - Task appropriate gloves
 - Hearing protection

27.2.3 PPE must be upgraded when changes in conditions are noted during monitoring of the site. PPE requirements for handling hazardous substances are available in the specific SDS.

SECTION 28: SMALL TOOLS (POWER, AIR AND HAND TOOLS)

28.1 GENERAL INFORMATION Contractor must follow the manufacturers' guidelines and guidelines from this section, for using small tools.

- 28.2.1 Power, air, and hand tools must be in good working condition. Replace worn tools immediately.
- 28.2.2 Remove damaged or frayed cords from service. Do not hoist or lower tools by the cord or hose.
- 28.2.3 Do not use power tools if safety equipment such as shields, tool rests, hoods, and guards have been removed or rendered inoperative.
- 28.2.4 As stated in the Job Hazard Assessment (or Workplace Hazard Assessment), contractor must wear identified PPE when using tools.
- 28.2.5 Ground electrically powered tools by ground-fault-circuit interruption devices.
- 28.2.6 Reduce the operating pressure of compressed air used for cleaning purposes to 30 psi or less. NOTE: Compressed air cannot be used to clean substances from workers clothing or bodies.

SECTION 29: STOP WORK AUTHORITY

29.1 GENERAL INFORMATION

- 29.1.1 All Contractor and / or Company representatives have the authority and are required to suspend a work task or group operation when the control of safety or environmental risk is not clearly established or understood.
- 29.1.2 Stop Work Authority ensures the right thing is done the right way. This program manages risk, protects personnel, the environment and assets. Intervention will be supported by the Company and no action will be taken against anyone who, in good faith, uses the Stop Work Authority.

29.2 KEY REQUIREMENTS

- 29.2.1 Work must be stopped when:
 - Any Contractor brings attention to an unsafe act or condition.
 - An unsafe condition could result in an undesirable event.

29.2.2 The steps to take:

- Stop work activities, remove workers from area and stabilize the situation. Make the area as safe as possible.
- Notify all affected personnel and Company Representative of the stop work issue.
- 29.2.3 Most issues can be adequately resolved in a timely fashion at the job site.
- 29.2.4 Any reprisal against a person using stop work authority because that individual, in good faith, stopped work is strictly forbidden.

SECTION 30: TRAINING

30.1 GENERAL INFORMATION

- 30.1.1 The Contractor shall assure that personnel have an appropriate level of competence in terms of education, training, knowledge and experience.
- 30.1.2 All Contractor workers must meet minimum safety awareness level training requirements, known as the CORE components of (MSTQ)Minimum Safety Training Qualifications.

- 30.1.3 Contractor must perform applicable training relative to the scope of work. Conduct training and document the proper application, use, care and maintenance of safety equipment for all affected workers.
- 30.1.4 Contractor must conduct safety meetings to instruct on the recognition and avoidance of hazards in the work place. Safety meetings must focus on topics related to the scope of work to be conducted to ensure all contract workers understand potential hazards and mitigation steps.

30.2 KEY REQUIREMENTS

- 30.2.1 Daily tailgate safety meetings are required prior to work commencing. These tailgate meetings are intended to review applicable safety permits, the JHA, and/or lessons learned.
- 30.2.2 Detailed safety meetings must be conducted at least once per week.
- 30.2.3 Safety meetings/training and tailgates must be documented by the Contractor. The documentation must include each topic discussed, content, attendees, dates and the name(s) of instructors or persons presiding.
- 30.2.4 Company Representatives/Inspectors may attend these meetings to evaluate their value and improve two-way communications.
- 30.2.5 Contractor must implement a Short Service Worker (SSW) Program for all Contractor workers that have less than 6 months of experience in a specific discipline. It is the Contractor's responsibility to have a means of identifying short service workers. This can be accomplished with a unique colored hard hat or distinctive and easily visible marker or identifier.
- 30.2.6 Contractor must be able to provide documentation of training and/or qualification for individuals assigned to specific tasks. This must be documented utilizing STEMulation's Training Qualification / OSHA10.

SECTION 31: WORKSITE SAFETY

31.1 GENERAL INFORMATION

- 31.1.1 Contractor shall inspect each work area at the beginning of each shift, and periodically thereafter, to maintain safe working conditions.
- 31.1.2 Contractor shall provide illumination bright enough for work to proceed safely. 45.1.3 Contractor shall follow all applicable Company rules and governmental laws/regulations related to the prevention of distracted driving while on Company premises or Right-of-Way. The most stringent requirement supersedes unless otherwise note herein.
- 31.1.4 Contractor must ensure protection from severe weather conditions including, but not limited to, hurricanes, extreme winds, tornadoes, lightning storms, extreme heat or cold, and flooding. Contractor must develop for implementation a severe weather safety action plan. The Project/Site Safety representative or Facility Manager will identify any work task that may continue on a case-by-case basis and communicate to the contractor.
- 31.1.5 If the English language is a communication barrier, Contractor at its expense shall timely convert/translate the STEMulation Learning Inc.'s Contractor Safety Manual accurately into the appropriate language for its employees and subcontractors.

31.2 KEY REQUIREMENTS

31.2.1 Lightning and weather can be unpredictable. If at any time, equipment operator believes that a weather condition creates an unsafe working condition, work should be stopped pursuant to Section 36 "Stop Work Authority" of this manual.

- 31.2.2 Lightning within six (6) miles of an operating facility or project site will be cause for immediate work stoppage for all outdoor operation, until such time there is no sign of lightning for thirty (30) minutes.
- 31.2.3 Lightning detection systems (fixed or portable) or National Weather Service information shall be used as a formal means of determining proximity of lightning to the site or facility. If a lightning detection system is unavailable, the distance may be calculated using the 30/30 rule. Once you see lightning, begin counting in seconds. If you hear thunder at or before reaching 30, you need to stop work until no lightning is seen for 30 minutes.
- 31.2.4 Contractors will adhere to a wind speed limit of 30 MPH sustained (average of observed values over two-minute period), or 35 MPH gust or the lesser of any manufacture listed recommendation or operating limit. At or above this threshold all exposed lifting and crane operations and any elevated work will be ceased and equipment secured.
- 31.2.4 Work stoppage for wind speed will continue for 30 minutes past the point that wind speeds drop back within limits. If multiple wind measuring devices exist within a facility or project the device indicating the highest wind speed shall be utilized.
- 31.2.4 The Contractor needs to evaluate the environmental extremes of the project, such as the ability of their personnel to work in areas of excessive cold or heat and implement appropriate procedures to provide a safe work environment.
- 31.2.5 Contractor shall provide an adequate supply of fresh drinking water on a daily basis for its personnel. Unless otherwise specified, Contractor shall provide and maintain clean portable restrooms.
- 31.2.6 No animals, except for service animals, are allowed on Company premises.
- 31.2.7 With the exception of hands free devices, the use of a cell phone or Personal Electronic Device (PED) is prohibited while driving on Company premises or Right of Way (US only). The use of cell phones, PED's, text messaging and emailing while driving in Canada is strictly prohibited.

SECTION 32: ENVIRONMENTAL REQUIREMENTS - GENERAL

- 32.1.1 Contractor must review and comply with all applicable environmental permits and conditions, laws, regulations, and Company requirements prior to the start and during work. Contractor will be provided copies of Company-obtained environmental permits, and Contractor will provide Company with copies of environmental permits it obtained.
- 32.1.2 Contractor must participate in and comply with all applicable project-specific environmental training prior to commencing work.
- 32.1.3 For projects on which the Company has designated an Environmental Inspector, the Contractor shall recognize that the Environmental Inspector has the authority to stop activities that violate, or have the potential to violate, environmental conditions, state/provincial or federal environmental permit requirements, or landowner requirements; and to order appropriate corrective action.
- 32.1.4 Contractor must use only approved access roads and stay within approved and designated working, staging, temporary use, and parking area boundaries. The Contractor will stay out of exclusion zones. All motorized vehicles must be cleaned to prevent the spread of weeds.
- 32.1.5 Contractor must handle, treat, characterize and dispose of all waste in accordance with all applicable federal and state/provincial regulations and any specific contract requirements, such as Company approval of

the disposal site. Trash, debris, and other wastes shall not be burned or otherwise disposed on site without proper permitting. Secure waste materials while on the worksite. Properly label all containers for content.

- 32.1.6 Contractor shall maintain a clean and safe worksite. Trash and debris will be collected at the end of each day. Dispose of cigarette butts in the receptacles provided, not in garbage bins or bags.
- 32.1.7 Contractor shall maintain equipment to prevent leaks. The Contractor shall take appropriate measures to contain potential leaks and repair leaks promptly.
- 32.1.8 Contractor shall perform refueling and equipment maintenance activities only in approved areas. Routine or planned vehicle maintenance is not allowed onsite. Before performing refueling and maintenance, install appropriate containment to collect potential spills (e.g., absorbent pads, plastic sheeting, and/or mats) beneath the equipment.
- 32.1.9 Contractor must not make any discharges to water that are not permitted or otherwise approved by law. In the event that the Contractor performs a discharge under an applicable state/provincial permit or regulation, they must comply with all applicable requirements.
- 32.1.10 Contractor must perform work in a manner that prevents effects of soil erosion and sedimentation in compliance with applicable laws, regulations, permits, and Company requirements. Clear and grade only areas necessary for construction and within the approved construction boundaries. Separate and replace topsoil in accordance with project requirements. Erosion and sediment control must be installed, inspected and maintained to contain soil on the construction site and away from wetlands and water bodies. Disturbed areas must be stabilized and re-vegetated where applicable, as soon as possible following construction in compliance with permit conditions, local ordinances, Company requirements or in accordance with landowner requirements.
- 32.1.11 Contractor must not collect or disturb indigenous plants, wildflowers, cultural artifacts, fossils or human remains in compliance with historic preservation laws, regulations, permits or Company requirements. If artifacts, fossils or remains are discovered, work must stop immediately in the areas of the discovery and a Company Representative must be notified. The site must be protected from incursion. Work in the area may resume only after the Company provides approval.
- 32.1.12 Contractor must not agitate, take, feed or otherwise harm wildlife (mammals, birds, snakes, etc.), or livestock. If wildlife or livestock are affected by the construction activity, Contractor must notify a Company Representative.
- 32.1.13 Contractor must not agitate, take, feed or otherwise harm species protected by federal, state/provincial, local statutes or permits or their habitat, or migratory birds or their nests. If protected species and/or their habitat or migratory birds and/or nests are affected by the construction activity, Contractor must stop activity in the area and notify a Company Representative. Work in area may resume only after the Company provides approval.
- 32.1.14 All Contractors who meet the requirements for needing a Spill Prevention Control and Countermeasure plan (SPCC) must prepare an SPCC Plan and comply with all plan requirements. The SPCC, if needed, must be submitted to the Company.
- 32.1.15 Spills resulting from Contractor activity must be reported to a Company Representative immediately. Immediate actions will be taken to safely stop the discharge, contain it, and clean it up in accordance with applicable statutory and Company requirements. Spills include, but are not limited to, small quantities of hydraulic fluid, motor oil and fuel spilled during equipment refueling operations.
- 32.1.16 Company facility/premise may be required to follow applicable Air Permit requirements. Contractors must review the permit with Company Representative to ensure all Air Permit requirements are followed.

| 32.1.17 Contractor must properly train their workers on their responsibilities regarding spill notification requirements and have all notification numbers available at all times. | |
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