



TRANSMOUNTAIN



Trans Mountain Contractor Safety Manual

October 2019

Company Emergency Numbers

Pipeline/Facility CCO _____

Site Emergency _____

Operations Supervisor _____

One-Call Numbers

Alberta One-Call 1-800-242-3447

BC One-Call 1-800-474-6886

US One-Call 811 or specific State number

Other Phone Numbers

Table of Contents

Table of Contents	3
Section 1: Introduction/General Requirements/Definitions.....	5
Section 2: Contractor Safety Program Administration.....	7
Section 3: Accident/Incident Reporting and Investigation	9
Section 4: Alcohol, Illegal Drugs and Firearms	10
Section 5: Asbestos	12
Section 6: Chains, Slings and Cables	12
Section 7: Confined Space/Confined Space Entry Permit	13
Section 8: Cranes, Rigging and Cribbing.....	14
Section 9: Drones/Unmanned Aircraft	16
Section 10: Electrical Safety and Overhead Power Lines	16
Section 11: Emergency Evacuation.....	17
Section 12: Excavations/Trenching and Shoring.....	17
Section 13: Fall Protection.....	18
Section 14: Fatigue Management.....	19
Section 15: Fire Prevention and Protection	19
Section 16: First Aid/CPR & Blood-Borne Pathogens	20
Section 17: Floors, Roofs and Wall Openings.....	20
Section 18: Hazard Communications (WHMIS Canada –HAZCOM US).....	21
Section 19: Hazardous Atmospheres	22
Section 20: Housekeeping.....	22
Section 21: Job Hazard Analysis.....	23
Section 22: Ladders.....	23
Section 23: Lead in Construction.....	24
Section 24: Lockout/Tagout (Control of Hazardous Energy).....	24
Section 25: Noise/Hearing Protection.....	25
Section 26: Personal Protective Equipment (PPE)	25
Section 27: Process Safety Management (PSM) and Risk Management Plan (RMP)	26
Section 28: Protecting the Public.....	26
Section 29: Radiation Producing Equipment.....	26
Section 30: Regulatory Agency Inspections/Citations/Notice of Violations.....	27
Section 31: Respiratory Protection	28
Section 32: Right of Way/Roadside Work/Working Near Railroad Crossings.....	29
Section 33: Safety Permits for Safe Work or Hot Work.....	29
Section 34: Scaffolds	30

Section 35: Security Requirements	31
Section 36: Small Tools (power, Air and Hand Tools).....	32
Section 37: Stop Work Authority.....	32
Section 38: Training.....	33
Section 39: Underground Utility Locating (One Call).....	34
Section 40: Vehicles – Heavy Equipment (Mobile Powered)	35
Section 41: Water/Dock Safety.....	36
Section 42: Welding Safety	37
Section 43: Work Clothing	37
Section 44: Worksite Safety	38
Section 45: United States – DOT – Operator Qualification (OQ)	39

Section 1: Introduction/General Requirements/Definitions

Trans Mountain Canada 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 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 condition.

This document provides all contractors with the minimum Health and Safety (H&S) standards required while working on and/or adjacent to Company premises. Non-compliance with safety 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.
- Maintain a positive safety culture.
- 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.

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 Canada and the metric numbers are applicable in USA.

Electronic copies can be found on The Company's website: www.transmountain.com

NOTE: Consultants, Engineering Support, Minimal Risk Contractors, Temporary Labour, Visitors used in an office setting and/or escorted on project premises for general observation tasks are required to receive a site-specific safety orientation. This 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.

The Company 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.

The Company maintains an ethics hotline for reporting of noncompliance:

Ethics Hotline — 1-844-725-1314 - 24 hours a day, 7 days a week or report online:
<https://transmountain.ethicspoint.com>

CANADA / US REGULATORY REQUIREMENTS CONTRACTOR RESPONSIBILITIES

A Contractor is responsible for complying with applicable Federal, State, Provincial, and Local Laws including H&S regulations in Canada and the United States. A Contractor must also comply with the requirements listed

in the Contractor Safety Manual and Company site-specific and/or business unit policies and procedures that are applicable to the project scope of work (SOW).

The standards presented in this document are not an exhaustive list of all applicable requirements and regulations. As a general rule, if there is uncertainty over which legislation applies (i.e., Federal, State, Provincial, Local) comply with the most stringent requirement.

For Canadian Contractors, provincially regulated premises must comply with the Canada Labour Code. Provincially regulated sites must follow the Alberta Occupational Health and Safety Act, Regulation and Code, the British Columbia Occupational Health and Safety Act and Regulation.

For U.S. Contractors, Occupational Safety and Health Administration (OSHA) General Industry Standards (1910), Construction Standards (1926) and/or the Mine Safety and Health Act (MSHA) may apply depending on the nature of the work.

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 National Safety Council or Federal Motor Carrier Safety Regulations.

CER: Canadian Energy Regulator. The Canadian Energy Regulator (or Board) regulates pipelines, energy development and trade in the Canadian public interest.

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

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.

CRIBBING / SKIDDING: Is a process of stacking wooden skids (made of hardwood) to form a sturdy platform in which to secure pipeline joints.

CSA: Canadian Standards Association.

CSM Forms: Company forms are referenced within this document and are applicable to both Canada and US. Forms are identified as CSM-001 through CSM-020. ALL APPLICABLE Canada and US Contractor Safety Forms can be found on the Contractor Safety webpage on Trans Mountain's external website:
www.transmountain.com

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.

PHMSA: Pipeline and Hazardous Materials Safety Administration Pipeline Regulations.

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 H&S requirements.

The Company updates this document and applicable forms periodically. Contractors are advised to check the Company website www.transmountain.com for the most current Contractor Safety Manual and forms.

2.1 PRE-JOB REQUIREMENTS

A Contractor is required to participate in the Company's Contractor Safety Evaluation Program by subscribing to ISNetworld (ISN) or have a Contractor Exemption / Variance Safety Evaluation completed and signed by the Company Hiring Manager.

Each Contractor subscribing to ISN is required to track their hours worked for Trans Mountain and enter safety statistics applicable to their country into ISN. This information includes, but is not limited to the following:

- All work completed for Trans Mountain Operations Projects
- Canadian WCB Statistics
- Canadian WCB Rates
- U.S. OSHA Statistics
- U.S. EMR Rates
- Safety Programs

The Company requires the Contractor to have satisfactory statistical scores in the above categories prior to the award of any work and must be maintained quarterly thereafter.

It is the Company's expectation that the Contractor's status within the ISN database remain satisfactory 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.

Contact information for ISN: www.isnetworld.com

At any time during the job, an H&S desktop, or field audit may be performed. These audits will be performed at selected facilities as determined by the Contractor Safety Department to verify the contractor's information in ISNetworld, 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, COMPANY shall have the right to remove the Contractor from the project and revoke ISN status. A third-party auditor may also assist COMPANY 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 H&S 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 through ISN Online Training process, or form CSM-003. 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 Safety Manual occur.
- Contractor personnel must be issued the Company's current "Contractor Safety Orientation" sticker for their hardhats. The Contractor Safety Manual may be issued to each participant. At a minimum, the location of the Contractor 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.

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 the ISN process. The Contractor may utilize form CSM-005 or equivalent to document evaluations of their subcontractors. The Contractor must submit the required subcontractor 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:

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

2.5 SITE/PROJECT HEALTH AND SAFETY PLANS (HSP)

Contractor may be required to develop a site/project specific Health and Safety Plan (HSP). If required, the HSP must establish the H&S 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 HSP. The original HSP and any modifications or changes must be submitted to the Company Representative for review prior to the start of work. Any revisions to the HSP will be returned to the Contractor for discussion or implementation.

A project-wide HSP 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 KEY REQUIREMENTS

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 The Company 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, ID, 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, Canadian Energy Regulator (CER) 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 monthly basis using ISN Site Tracker

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 KEY REQUIREMENTS

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.

Serious Incidents
Fatality/Injury/Illness
Fatality to employee or contractor (on the job).
Employee or contractor injury/illness requiring treatment beyond first aid including cases with days away from work, restricted duty, or temporary removal (DART).
Property Damage
Estimated property damage to company, customer, or third party equipment or facilities; or company's portion of the repairs, cost, spill remediation, and/or emergency response or product lost that is likely to exceed \$50,000.
An avoidable vehicle accident where the Company's portion of the repairs or cost associated with the incident is likely to exceed \$5,000 in total.
Fire, rupture, or explosion that involves the company, public, or private equipment/property where damage is likely to exceed \$5,000.
Any confirmed or suspected line hit involving company operations/equipment or caused by company personnel/contractors.
Environmental
Unplanned release of product or chemical(s) when the quantity released exceeds or may exceed a regulatory reportable quantity or enters or threatens to enter a body of water.
Operations
Unplanned operations disruption, shutdown, or service interruption resulting in overall loss likely to be \$50,000 or have material impact on a customer.
Near Miss
Any near miss which could reasonably result in loss or an outcome similar to the incidents listed above.
Phone Number
To arrange a D&A test - Cann Amm 1 (800) 440-0023 ID #3454

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 Canada, training must meet the regulatory requirements of the Province where work is taking place. In the U.S., training must meet the EPA Model Accreditation Plan criteria. 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 KEY REQUIREMENTS

6.2.1 Contractor shall ensure all chains, slings and cables are applicable for the job and are inspected and maintained according to the manufacturers' requirements.

6.2.2 Chains must not be used for vertical lifting of materials weighing over 1,000 lbs / 454 kilograms. Contractor can request a variance by submitting the applicable engineering data to validate the request. All variances must be approved by a Company Representative in writing.

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:

- Is enclosed or partially enclosed (i.e., shoring/bracing), and
- Is not designed or intended for continuous human occupancy, and
- Has limited or restricted means of entry or exit that may complicate the provision of first aid, evacuation, rescue, or other emergency response service, and
- Is large enough and so configured that a worker could enter to perform assigned work, and
- May become hazardous due to its design, construct, location or atmosphere, or the materials or substances contained within.

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). The company must determine the hazard-rating as being **High**, **Moderate**, or **Low** after considering the design, construction, and use of the confined space; the work activities to be performed; and all required engineering controls.

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 and rescue plan 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 For US Only - A permit required confined space may be reclassified under the following conditions:

- 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: Cranes, Rigging and Cribbing

8.1 GENERAL INFORMATION

8.1.1 Proper set up and operation of cranes and rigging is required.

8.1.2. This section applies to crawler cranes, locomotive cranes, gantry crane, sidebooms, wheel mounted cranes of both truck and self-propelled wheel type and any variations having the same fundamental characteristics.

8.1.3 Contractor must have a lift plan for all anticipated lifts requiring use of specialized equipment for the duration of the project. Specialized equipment may include, but is not limited to: Lulls, Cranes, and Boom Trucks. Equipment and/or rigging gear must follow the Original Equipment Manufacturers (OEM) recommended lift specifications and capacities.

8.2 KEY REQUIREMENTS

8.2.1 A competent person must conduct and document a daily inspection of cranes. If a crane is moved or the lifting process changes during operation it must be re-inspected prior to performing the lift in order to reflect the changes. If the crane or its associated rigging exhibits any damage or excessive wear during daily inspection, the crane cannot be used.

Critical lifts identified shall require the review and approval of a qualified professional engineer with crane(s) and heavy lifting expertise, a complete risk assessment and the completion of the Critical Lift plan. Lifts considered to fall within this classification are those which meet any one of the following criteria:

1. A lift or tandem lift if the load on any one crane, hoist, or other piece of powered lifting equipment exceeds 75% of the rated capacity of that crane, hoist, or other piece of powered lifting equipment.
2. A tandem lift involving the simultaneous use of more than two cranes, hoists, or other pieces of powered lifting equipment.
3. A lift in which the center of gravity of the load changes during the lift.
4. A lift in which the length of one or more sling legs changes during a lift.
5. A lift by a crane supported on a floating base that exceeds 90% of rated capacity for the lifting system.
6. A lift of a load over or between energized high-voltage electrical conductors.
7. A lift of a submerged load.
8. Any lift requiring the use of more than one crane, the load is not symmetrical or requires specialized rigging.
9. Any lift in which poses a risk of personnel injury or equipment damage is possible.
10. The load endangers existing facilities, due to restriction of movement, energized power lines, pressurized pipe, etc.
11. The complexity of the lift requires input from a professional engineer.

8.2.2 Crane inspection records must be kept on site with the crane or in the Contractor's temporary office and readily available for inspection.

8.2.3 Rigging devices must have permanently affixed identification stating size, grade, rated capacity, and manufacturer.

8.2.4 If it is determined that any portion of equipment being operated under a power line can be within 6m (Canada), 20' (US) of a power line, a plan must be developed following guidelines set forth in the regulatory requirements.

8.2.5 Contractor must clearly mark all lifting or boom type equipment to show the maximum height or extension measured from the ground level. If the work cannot be performed while maintaining the proper working clearances, Contractor must hold a detailed work planning meeting with the Company Representatives, Contractor and utility Company.

8.2.6 Tag line(s) must be used on all lifts.

8.2.7 Contractor must develop a Lift Plan and use only documented, qualified riggers when lifting any load.

8.2.8 For Pipeline Construction Projects in the U.S - Safety Latches should be used when they make the task safer. The determination of whether or not a hook should be used with or without a latch is dependent on the circumstances and whether the addition of the latch will result in a safer operation instead of creating an additional hazard.

8.2.9 The determination must be based upon the applicable requirements and the manufacturer's recommendations for the type of hook. The Contractor may consider without limitation, the following:

- All applicable regulatory standards and interpretation letters.
- Pre-arranged means of communication and placement of the load.
- Pre-planned routes for suspended loads designed to minimize workers from being below or near a moving or suspended load.
- Any required training for workers hooking and unhooking loads.

8.2.10 Contractor shall develop a Cribbing/Skidding Plan when working with large diameter pipe (30" and larger) or using mechanized welding. At a minimum the procedure must address the following requirements:

- When cribbing is initially set up, personnel shall inspect the skids for defects (cracks, splintering, other deformations). Defective skids shall be discarded from use and removed from the site for disposal. Inspect and monitor all piping on cribbing before work begins.
- Where welded sections of pipe joints are strung, crutching shall be installed on the 1st, 3rd and 5th cribbing from any loose end and every 5th set of cribbing thereafter.
- Where soil conditions or terrain may cause cribbing to sink or lean to one side, increase the area of the base by adding more timbers, utilize a mat, or plywood (of adequate thickness) under the cribbing to help distribute the weight more evenly.
 - If none of the above is appropriate to safely support the weight of the pipe section then a wide base configuration shall be utilized every 5th joint. A wide base configuration usually encompasses a double sized crotch that is set up transverse to the pipe section which in turn will provide a larger base.
- Pipe shall not be solely supported vertically by a side-boom, crane, or loader during the welding process. Cribbing shall be utilized under the pipe. At no time shall anyone be allowed to work under or around a load until it is safely supported.

8.2.11 Contractor must utilize documented, qualified signal persons when the point of crane operation is not in full view of the operator.

Section 9: Drones/Unmanned Aircraft

9.1 GENERAL INFORMATION

The use of drones by contractors performing work for Company is permissible provided an executed agreement is in place, that an acceptable grade in ISNetwork exists, and key requirements are met.

9.2 KEY REQUIREMENTS

9.2.1 Contractor agreements that are using un-manned aircraft/drones must be modified to include specific comprehensive aircraft liability insurance verbiage.

9.2.1 All contractors are required to comply with the following:

Transport Canada's UAV regulations as outlined in Canadian Aviation Regulations, Aeronautics Act. Possess a valid Special Flight Operations Certificate (SFOC).

FAA regulations as outlined in Summary of Small Unmanned Aircraft Rule (Part 107) and verified (through ISN) prior to the usage of unmanned aircraft/drones when working for Company.

Section 10: Electrical Safety and Overhead Power Lines

10.1 GENERAL INFORMATION

This section applies to the use of electrical power to operate equipment and electrical power tools, and all work near electrical systems including, but not limited to, overhead or underground power lines.

10.2 KEY REQUIREMENTS

10.2.1 Power cable systems within the work area must be de-energized during excavation whenever there is doubt about cable location.

10.2.2 The Contractor must protect workers from electric shock while using power tools, appliances and related equipment by using Ground Fault Interrupter (GFI) systems on all power outlets/sources during construction and maintenance.

10.2.3 Only qualified and authorized Contractors are permitted to work on electrical equipment.

10.2.4 All electrical equipment must be properly grounded and/or bonded.

10.2.5 Electrical equipment must be treated as if it were energized and be verified for de-energization.

10.2.6 The Contractor must place guards and/or barriers to prevent incidental contact with exposed electrical equipment. Cover plates must be correctly placed on equipment when they are not monitored.

10.2.7. Contractor must provide and use applicable PPE and test equipment per regulatory requirements. For example, high voltage proximity detectors, rubber insulating gloves, blankets, hoods, sleeves and line hoses.

10.3 OVERHEAD POWER LINES

10.3.1. The Contractor must advise its workers of the location of any power lines, hazards involved, and the protective measures to ensure lines are not hit. If work is to be conducted or equipment is to be operated within 7 m (23 ft) of a power line, the Contractor Supervisor must contact the operator to determine the voltage of the line, and then determine the appropriate safe work distance.

10.3.2 Mandatory controls to prevent utility strikes must include three of the following five layers of safety controls:

- Signage – “Beware of Overhead Lines” signs must be placed at equipment operator’s eye level and must be a minimum of 60cm by 60cm (Canada), 2 feet by 2 feet (US).
- Physical barriers – A non-conductive barrier, (i.e., goal posts with rope and ribbons/flagging), must be set outside the limits of the approach on both upstream and downstream sides at a minimum of 10 feet.
- Dedicated spotter – A dedicated person to monitor and direct traffic around and under lines using an appropriate audible alarm (i.e. an air horn) to warn operators of the hazard.
- Proximity alarms – Alarms attached to the equipment that are set off when equipment is too close to an energized source.
- Utility controls – site specific controls (i.e., line insulators, line raising or outage(s)).

10.3.3 The Contractor shall contact the local utility Company and be aware of any special requirements. The Contractor shall maintain the clearance to the power line following minimum clearance requirements.

Section 11: Emergency Evacuation

11.1 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).

11.2 KEY REQUIREMENTS

11.2.1. 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.

11.2.2. Contractor must shut-off all equipment IF DOING SO DOES NOT POSE RISK OF INJURY.

11.2.3. Contractor must audibly notify workers and evacuate to the pre-determined assembly area by the safest available route.

11.2.4. The Contractor must account for all workers.

11.2.5. The Contractor must remain in the assembly areas until otherwise directed.

Section 12: Excavations/Trenching and Shoring

12.1 GENERAL INFORMATION

12.1.1 Excavation services are any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced by means of tools, equipment, or explosives in any of the following ways: grading, trenching, digging, ditching, drilling, auguring, tunneling, scraping, cable or pipe plowing and driving, or any other way.

12.1.2. In ALL work areas where the exact location of underground utilities is known or unknown, the appropriate Dig Safe or One Call system must be notified so the owner / operators can locate and clearly identify their utilities prior to beginning excavation work. This notification must be conducted at least 3 days (Canada) and 2 days (U.S.) and prior to start of work.

12.2 KEY REQUIREMENTS

12.2.1. The Contractor must provide adequate protective systems such as benching, sloping, or shoring when the sides of a trench are more than 1.2m (Canada), 4' (US) deep and intended for worker entry.

12.2.2. Excavations over 6m (Canada), 20' (US) deep or that do not meet regulatory requirements must have protective systems designed by a Professional Engineer (PE/PEng) within the same province/state. The PE/PEng design documentation must be onsite and available for inspection.

12.2.3. The Contractor's Competent Person must conduct daily excavation inspections and document on form CSM-002, prior to anyone entering an excavation. This documentation must be located at the excavation. If the inspection shows the area to be unsafe, the unsafe condition must be mitigated prior to resuming work.

12.2.4. A secured ladder, ramp, or other means of egress must be provided within 7.6m (Canada), 25' (US) of all workers in a trench that exceeds 1.2m (Canada), 4' (US) in depth and/or when using a trench box.

12.2.5. The Job Hazard Assessment will determine what atmospheric monitoring (e.g. O₂, LEL, H₂S, CO), will be conducted prior to a worker entering an excavation that exceeds 1.2m (Canada), 4' (US) in depth and has the potential to contain a hazardous atmosphere.

12.2.6. Excavated material must be placed at least 1m (Canada), 2' (US) away from the edge of the excavation (e.g., spoil pile, rocks, broken concrete or other debris).

12.2.7. If walkways are provided over excavations, they must be capable of supporting the weight of the traffic, guardrails and toe boards. Every crossover must have engineering design documentation and meet regulatory design standards. Contractor must use toe boards if working below the walkway.

12.2.8. Excavations must be secured to keep vehicles and unauthorized personnel out. High visibility fencing material placed 1.2m (Canada), 4' (US) from the edge of the excavation when possible must be used to warn of the danger in high profile/vehicular traffic areas. Traffic impact plans may be required in high vehicular traffic areas.

Section 13: Fall Protection

13.1 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.

13.2 KEY REQUIREMENTS

13.2.1 Contractor must be protected from fall hazards of 2.4m (Canada), 8' (US) 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 1.8m (Canada), 6' (US) or contact any hazardous point at a lower level. Positioning or fall prevention devices must be rigged to prevent free falls more than 0.6m (Canada), 2' (US).

13.2.2 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.

13.2.3 The Contractor must provide a Competent Person to oversee fall protection compliance and will confirm workers are competent and certified in all aspects of fall protection necessary to complete the work requiring fall protection or to install fall protection systems.

13.2.4 The Contractor must develop a written “Rescue Plan” wherever personal fall arrest equipment is used.

Section 14: Fatigue Management

14.1 GENERAL INFORMATION

14.1.1 Contractor shall have a Fatigue Management program in place. Fatigue has shown to be a major contributor to workplace injuries. Fatigue slows reaction time, impairs judgement and heightens distractibility.

14.2 KEY REQUIREMENTS

14.2.1 Contractors program shall address initial and annual training for workers on fatigue and controlling it.

14.2.2 Contractors program shall address limiting work hours and controlling job rotation schedules to help control worker fatigue.

14.2.3 Analysis of work tasks to control fatigue must be documented.

14.2.4 Roles and responsibilities of workers to report tiredness/fatigue to supervision and those supervisor’s responsibility to take appropriate action shall be addressed in the contractors’ program.

Section 15: Fire Prevention and Protection

15.1 GENERAL INFORMATION

15.1.1 A Fire Watch is a designated individual who monitors the hot work site where open or non-open hot work is 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.

15.2 KEY REQUIREMENTS

15.2.1 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.

15.2.2 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.

15.2.3 Matches or uncovered and trigger-type lighters are not allowed.

15.2.4 All non-intrinsically safe devices are permitted only in Company approved areas or by permit. Devices include, but are not limited to, cell phones, pagers and cameras.

15.2.5 All flammable and combustible liquids must be stored in metal (fuel cans) and must be placed at least 0.9m or 3’ away from other flammable storage cabinets. For Canada, portable storage containers (fuel cans) for flammable liquids must meet either the Underwriter’s Laboratories of Canada or Canadian Standards Association requirements.

15.2.6 The volume of Class I, Class II, and Class IIIA liquids stored within a single approved storage cabinet must not exceed 454 L (Canada), 120 gallons (US).

15.2.7 Approved storage cabinets must be UL (Underwriters Laboratory) Listed or fire marshal approved for indoor storage of flammable or combustible liquids.

Section 16: First Aid/CPR & Blood-Borne Pathogens

16.1 GENERAL INFORMATION

16.1.1 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.

16.1.2 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.

16.2 KEY REQUIREMENTS

16.2.1 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 approved for the jurisdiction they are working in.
- 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 17: Floors, Roofs and Wall Openings

17.1 GENERAL INFORMATION

17.1.1 The Contractor must prevent falls from roofs, wall and floor openings by ensuring proper safeguards are in place.

17.1.2 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.

17.1.3 Installation of a standard railing is required for floor perimeter and wall opening protection.

17.2 KEY REQUIREMENTS

17.2.1 Wire rope used as top rail or/mid-rail must be 1.27cm (Canada), ½ "(US) in diameter with at least three J-type fist grip wire rope clamps at each connection and turn buckles every 30.4m (Canada), 100' (US). Use thimbles where the wire rope is connected. Any guardrail system installed must be constructed so that it is capable of resisting all loads that it may be subjected to by a worker.

17.2.2 For construction work performed on low sloped roofs (less than 4:12 pitch), or work areas within 7.6m (Canada), 25' (US) of an unprotected edge, a warning line system may be used as alternative protection.

17.2.3 Stair railings must be constructed similar to a standard railing, but the vertical height must be 90cm – 1.1 m (Canada), 34-36" (US) from the top rail to the surface tread in line with the face of the riser, at the forward edge of the riser.

17.2.4 Floor opening covers must be used for openings greater than 5cm (Canada), 2" (US) and capable of supporting the maximum intended load and installed to prevent accidental displacement.

17.2.5 During construction, Contractor must provide temporary stairs on structures that are two or more floors or more than 6.1m (Canada), 20' (US) high until permanent stairways are in place.

17.2.6 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.

Section 18: Hazard Communications (WHMIS Canada – HAZCOM US)

18.1 GENERAL INFORMATION

Contractor must establish and maintain a written, comprehensive Hazard Communication Program (WHMIS/HAZCOM). 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.

18.2 KEY REQUIREMENTS

18.2.1 Contractor must prepare a hazardous materials list before the materials arrive on site.

18.2.2 The use of hazardous materials on Company premises requires consultation with the Company.

18.2.3 Contractor must maintain the most current SDS sheets provided by manufacturers and distributors of the material.

18.2.4 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).

18.2.5 Contractor shall inform personnel of the hazardous materials associated with the work they perform, and communicate hazards where work is being conducted.

18.2.6 Storage cabinets must be marked in conspicuous lettering: **FLAMMABLE — KEEP FIRE AWAY.**

18.2.7 Unless otherwise specified regulations require that flammable and combustible liquids be stored:

- In a quantity insufficient to produce an explosive atmosphere if inadvertently released.
- More than 30.4m (Canada), 100' (US) 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 19: Hazardous Atmospheres

19.1 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.

19.2 KEY REQUIREMENTS

19.2.1 All personnel working in a potential H₂S environment must have certificates verifying proper training. Additionally, all personnel working in a potentially hazardous 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 CANADA AND US. CHECK REGULATIONS FOR PEL LIMITS.

19.2.2 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 CANADA AND US. CHECK REGULATIONS FOR PEL LIMITS.

19.2.3 Oxygen levels must be between 19.5% and 23% (Canada) and 19.5% and 23.5% (U.S.).

Section 20: Housekeeping

20.1 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.

20.2 KEY REQUIREMENTS

20.2.1. Keep work areas, passageways, fire exits, fire lanes, and stairs in and around the buildings and structures clear of debris at all times.

20.2.2. Properly store all tools and equipment after use. Keep walkways free of dangerous depressions, obstructions, and debris.

20.2.3. Clean the work area daily and dispose of debris in dumpsters, or off site in accordance with requirements.

20.2.4 Contractor must remove all unused material and equipment upon the completion of the project.

Section 21: Job Hazard Analysis

21.1 GENERAL INFORMATION

Contractor must conduct a daily Job Hazard Analysis (JHA), Tailgate Meeting 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.

21.2 KEY REQUIREMENTS

21.2.1 The JHA and/or Safe Work Permit must be documented and used on a daily basis and communicated at each daily tailgate meeting.

21.2.2 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.

21.2.3 Job Hazard Analysis and/or Safe Work Permits must be available for review and retained in the job file.

Section 22: Ladders

22.1 GENERAL INFORMATION

Ladders used on Company premises must meet appropriate guidelines. 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. In the US, manufactured ladders must comply with ANSI specifications.

22.2 KEY REQUIREMENTS

22.2.1 Metal ladders are prohibited for electrical work.

22.2.2 Stepladders must be fully opened when in use. Safety latches on extension ladders must be fully engaged.

22.2.3 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. The workers body position must remain central on the ladder (align the belt buckle with the center of the rungs), never lean to one side or another to reach for an object.

22.2.4 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 0.9m (Canada), 3' (US) 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.
- Ladders are to be stored where there is good ventilation and away from harsh environmental elements. Ladders may be stored hung horizontally. Any vertical ladders must be properly secured.

Section 23: Lead in Construction

23.1 GENERAL INFORMATION

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

23.2 KEY REQUIREMENTS

23.2.1. All Contractors who perform work where there is exposure to regulated levels of lead must have a written Lead Abatement Program.

23.2.2. 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.

23.2.3. Training records and certificates must be documented and maintained by the Contractor and made available to the Company upon request.

Section 24: Lockout/Tagout (Control of Hazardous Energy)

24.1 GENERAL INFORMATION

24.1.1 Guidelines and safeguards must be in place to protect Company and Contractor from unexpected startup or energy release.

24.1.2 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.

24.1.3 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.

24.2 KEY REQUIREMENTS

24.2.1 All Lockout/Tagout shall be coordinated with Company before working in an area of hazardous or stored energy.

24.2.2 The Contractor shall follow applicable JHA and/or Work Permit requirements before performing work.

24.2.3 The Contractor shall review and understand the Company's Lockout/Tagout procedures (Code of Practice 702) and adhere to all warnings including.

- Unauthorized removal of lockout/tagout devices is prohibited;
- Unauthorized operation or servicing of equipment is prohibited.

24.2.4 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.

24.2.5 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.

24.2.6 Contractor shall follow specific Company procedures when working on Company equipment. Contractor shall develop and follow their own Lockout/Tagout procedures prior to working on equipment during new construction.

Section 25: Noise/Hearing Protection

25.1 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 84 decibels.

Section 26: Personal Protective Equipment (PPE)

26.1 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.

26.2 KEY REQUIREMENTS

26.2.1 The Contractor must supply all required PPE to its personnel.

26.2.2 Unless otherwise specified in a WHA (Workplace Hazard Assessment) and/or Company Business Unit requirement, the minimum PPE shall include:

- Hard hats [compliant with CSA Z94.1-05 and ANSI Z.89.1 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 and could include:
 - Fire Retardant Clothing
 - High Visibility Clothing
 - Reflective Clothing
 - Task appropriate gloves
 - Hearing protection
 - Floatation aids
 - Double hearing or face protection (glasses and face shield when grinding).

26.2.3 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 27: Process Safety Management (PSM) and Risk Management Plan (RMP)

27.1 GENERAL INFORMATION

Contractors working at a facility under the jurisdiction of PSM and/or RMP must comply with all regulatory requirements. Contractors working on or around the covered process in a PSM and/or RMP facility are required to:

- Provide its personnel information on the hazards of the process and the applicable provisions of the emergency action plan.
- Train personnel to safely perform assigned tasks.
- Assure personnel follow facility safety rules.
- Advise the Company of any special or unique hazards associated with its work on the covered process.

Additional site-specific requirements may apply and the Contractor must check with a Company Representative to identify them.

Section 28: Protecting the Public

28.1 GENERAL INFORMATION

Contractor must protect the public with appropriate and visible protective systems when the public could be exposed to hazards.

28.2 KEY REQUIREMENTS

28.2.1 Exterior Protection Procedures

- Keep sidewalks, entrances, lobbies, corridors, aisles, doors, and exits clear of obstructions to permit safe entrance and exit at all times. Post appropriate warning and instructional safety signs. Barricades must be provided where sidewalks, sheds, bridge fences, or guardrails are not required between work areas and pedestrian walkways, roadways and occupied buildings. Barricades must be secure, except where temporary removal is necessary to perform work.

28.2.2 Interior Protection Procedures

- Before starting work in occupied buildings, contractors must coordinate with a Company Representative and develop a work plan. The SOW must include risks such as: electricity or gas outages, excessive noise generation, chemical fumes, asbestos, and fire exit blockages. The work plan must address provisions for proper communication and related control measures. Control measures may include providing PPE, scheduling work during non-business hours, or area evacuation. Contractor must notify the Company of revisions to this plan.

Section 29: Radiation Producing Equipment

29.1 GENERAL INFORMATION

29.1.1 Prior to operating any radiation producing equipment, the Contractor shall coordinate with the Radiation Safety Officer (RSO) assigned to that facility and/or project. Only properly trained, qualified personnel are allowed to use radiation producing equipment or materials on Company premises. The Contractor must maintain records of all training and qualifications.

29.1.2 Place radiation warning devices and signs containing the internationally recognized symbol for radiation around the perimeter of any area which may be affected by radiation.

29.2 KEY REQUIREMENTS

29.2.1 When radiographic equipment is used, the Contractor must ensure the area is clear and all personnel are at a safe distance from the radiation source.

29.2.2 All dark rooms must have a carbon monoxide monitor/alarm installed.

29.2.3 Contractor working with equipment that contain radioactive sources must:

- Coordinate work activities with the Company Representative (RSO). If the Contractor must work in proximity to radioactive material, work time around the radioactive source must be minimized by task planning.
- If the Contractor damages a radioactive source and/or an x-ray producing machine or observes one that may be damaged, they must contact the Company Representative (RSO) immediately.

Section 30: Regulatory Agency Inspections/Citations/ Notice of Violations

30.1 GENERAL INFORMATION

30.1.1 Company policy is to cooperate with authorized regulatory agency inspections. The Contractor is required to ensure that regulatory inspections are treated with high priority and with the utmost professionalism.

30.1.2 Contractor shall inform their Company Representative and COMPANY Contractor Safety of any and all potential or actual findings, citations, notice of violations (NOV's), or other corrective actions stemming from work being completed for the Company.

30.2 KEY REQUIREMENTS

30.2.1 For any agency audit or inspection, the Contractor represents itself, and not the Company, during the inspection. Upon notification of a regulatory agency audit or inspection, the Contractor must inform the Company Representative. If possible, this should be done prior to beginning the inspection. The Company will decide whether or not it will attend the inspection. In general, the Company will attend DOT/ CER inspections but no other agency inspections.

30.2.2 The Contractor should ask the regulatory inspector for applicable credentials and have them sign the visitor's register/log.

30.2.3 The Contractor should ensure the regulatory inspector follows all safety requirements, procedures and PPE requirements.

30.2.4 The Contractor should verify any equipment readings by performing parallel sampling and/or monitoring.

30.2.5 When the inspection and exit interview are completed:

- The Contractor must coordinate with the Company Representative and COMPANY Contractor Safety to discuss any findings, actions for compliance, responsible parties and estimated completion date for actions. The Contractor must take immediate action to correct all identified citations or violations and document actions taken.
- The Contractor must supply documentation of the corrective actions to the Company Representative and COMPANY Contractor Safety.

Section 31: Respiratory Protection

31.1 GENERAL INFORMATION

31.1.1 The Contractor must develop a written respiratory protection program relating to respirator use during work activities.

31.1.2 Any Contractor potentially exposed to hazardous atmospheres or substances in excess of permissible exposure limits must have applicable respiratory protection.

31.2 KEY REQUIREMENTS

31.2.1 Contractor's respiratory protection program must include, training records, medical clearance and fit test records. Air purifying cartridges must be tagged. The records must be documented and maintained by the Contractor. Contractors subject to a respiratory protection program must be clean-shaven at all times. Mustaches are permitted, provided that a proper seal can be maintained. Specific Company facility or Business Unit requirements may be more stringent, and therefore supersede this section.

31.2.2 Contractor must designate an individual to perform air monitoring at the premises to ensure Contractor is not overexposed. This individual will inform Contractor when respiratory protection is required and must continue to monitor the premises to determine if conditions change.

31.2.3 Supplied Breathing Air Use:

- Contractor must ensure supplied breathing air sources meet the applicable requirements. In Canada air must meet the requirements of CSA Z180.1 (Compressed Breathing Air and Systems). In the US, Grade D breathing air is required and described in ANSI/Compressed Gas Association Commodity Specification for Air, G7.1-1989. If compressors are used to supply breathing air, they must have suitable in-line air purifying devices to ensure air quality.
- For oil-lubricated compressors, Contractor must use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply must be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 5 PPM. Locate compressors in an area to prevent taking in contaminated air.
- For compressors that are not oil-lubricated, the Contractor must also ensure that carbon monoxide levels in the breathing air do not exceed 5 PPM.
- Air-purifying devices must be tagged with the most recent date of change-out.

Section 32: Right of Way/Roadside Work/Working Near Railroad Crossings

32.1 GENERAL INFORMATION

32.1.1 Work on or adjacent to existing public roadways must be performed in accordance with the requirements of applicable Traffic Control Programs. In the US this includes MUTCD (Manual of Uniform Traffic Control Devices) requirements.

32.1.2 Contractor must obtain applicable permits.

32.1.3 It is the contractor's responsibility to ensure worker is being completed safety while working around railroads. An orientation and flaggers may be required to work in close proximity to a railroad as per railroad owners request. Contractors working near an active railroad crossing, must document that all employees have been made aware of the associated driving hazards.

32.2 KEY REQUIREMENTS

32.2.1 Contractor must develop an approved written plan relating to vehicular traffic control during roadside work activities. The plan must include the proper placement of barricades, cones, signs, flashers and warning signs and must be available at all times.

32.2.2 Contractors exposed to vehicular traffic must be provided with and wear warning vests meeting regulatory requirements.

32.2.3 All flaggers must be trained or certified based on the applicable Federal, State, Provincial, and Local County and/or City requirements.

32.2.4 During sunrise/sunset or night time, lighted flashers and proper overhead illumination must be used so flaggers, personnel and equipment can be seen by oncoming traffic.

32.2.5 Contractors approaching a railroad crossing must abide by all applicable Federal, State, Provincial and Local laws.

Section 33: Safety Permits for Safe Work or Hot Work

33.1 GENERAL INFORMATION

33.1.1 Company premises have site specific procedures and permit requirements. Examples include, but are not limited to, the following: permit to work (Safe Work Permit), hazardous energy control, hot work permit, excavation permit, and confined space permit. These site-specific requirements and the requirements in this Manual must be defined during pre-job meetings and met with the most stringent requirements taking precedence.

33.1.2 Where applicable, the Company may require Contractor to obtain a Safe Work Permit on a daily basis from a Company Representative prior to the start of work. The permits must identify work to be completed, additional permits that may be required, potential hazards, and safety measures to be followed.

33.1.3 Unless otherwise agreed in the contract, Contractor is responsible for obtaining all applicable permits and for making all required notifications prior to the start of work, including One Call or excavation notices.

33.1.4 The Contractor must not operate any Company valves, equipment, fire suppression systems or alarm systems unless specifically outlined in the work permit or at the direct approval and/or presence of a Company Representative.

33.2 KEY REQUIREMENTS

33.2.1 Hot Work is defined as any work that involves the use of open flames or other sources of ignition with the potential to generate a spark, heat or static electricity that could cause a fire or explosion.

33.2.2 Hot work permits will be coordinated with Company Representative prior to commencing any hot work. Contractors performing hot work are responsible for the safe execution of assigned tasks. If an unsafe condition or potentially unsafe condition arises, work must be stopped, and the condition reported to a Company Representative. Contractors are responsible to adequately staff projects sufficiently to provide fire watch and post work checks once hot work is complete.

33.2.3 Proper safeguards must be implemented to guard against changes in the working conditions. Hot work on “in-service” equipment must follow special precautions and must be identified in the hot work permit.

33.2.4 Non intrinsically safe devices such as cell phones, computers, radios, lighting or power tools are not allowed in hazardous or potentially hazardous locations unless permitted by TM Supervisory personnel.

Section 34: Scaffolds

34.1 GENERAL INFORMATION

34.1.1 Scaffolds must be designed, built, inspected and tagged by a Competent Person and must conform to the applicable requirements. Conduct and document daily inspections before use.

34.1.2 Lean-to scaffolds and make-shift platforms are prohibited.

34.1.3 Do not store material on scaffolds except if using material while on the scaffold. Place material over cross members.

34.2 KEY REQUIREMENTS

34.2.1 Contractor must provide a Competent Person to oversee scaffold erection, inspection and permitting.

34.2.2 Contractor must ensure scaffolding design and construction provides:

- A guard rail fall protection system or personal fall arrest system when contractors are working at heights 1.2m (Canada), 4' (US) or greater and less than 3m (Canada), 10' (US).
- A guard rail fall protection system and personal fall arrest system when contractors are working at heights greater than 3m (Canada), 10' (US).
- Level footing capable of supporting the loaded scaffold without settling; and Components that can support at least 4 times the maximum intended load.
- In addition:
 - Wire or fiber rope used for scaffold suspension must be capable of supporting at least six times the intended load
 - All platforms must overlap at least 30.5cm (Canada), 12" (US) and be secured from movement
 - Contractors to provide overhead protection when working on or near scaffolding
 - Pole scaffolds must be tied to the building or structure at intervals of no more than 7.6m (Canada), 25' (US).

34.2.3 Contractor shall follow all applicable Company procedures, including use of specific forms, when scaffolding will be used by Company employees and/or Contractor employees at operational facilities.

Section 35: Security Requirements

35.1 GENERAL INFORMATION

35.1.1 All entry into Trans Mountain sites by visitors (contractors, vendors, or suppliers) must be pre-arranged with a Trans Mountain employee at the site in advance of their visit.

35.1.2 Visitors may only use the main entrance (gate or entry point) to enter and exit the site unless otherwise instructed by Trans Mountain staff.

35.1.3 Failure to adhere to site security procedures and expectations may result in the removal of the visitor from site.

35.1.4 Trans Mountain facilities are monitored by Closed Circuit Television (CCTV) systems. A visitor's activity may be captured and recorded on a CCTV system.

35.1.5 If a visitor is issued an access card to a site, the access records associated with that access card may be monitored, viewed, or reported on.

35.1.6 All visitors that are issued a Trans Mountain key or access card for site must immediately report to Trans Mountain if that access card or key is lost or stolen.

35.2 KEY REQUIREMENTS

SITE SECURITY PROCEDURES AND EXPECTATIONS

35.2.1 All visitors are required to present a minimum of one piece of government issued photo ID when entering a Trans Mountain site. Failure to present ID will result in access not being granted to the visitor. Expired government issued photo ID will not be accepted as a valid form of ID.

35.2.2 When entering a Trans Mountain facility or site, all vehicles, cargo, and belongings are subject to and may be searched. Failure to adhere to this requirement shall result in the visitor being denied entry into the site.

35.2.3 All visitors are required to abide by Trans Mountain's security expectations and procedures, this includes the following:

- All security incidents, near misses, and observations shall be reported to Trans Mountain as soon as possible. The incidents that visitors shall be aware of and report to Trans Mountain include but are not limited to:
 - Any and all breaches of the site by unknown or unpermitted person(s);
 - Unknown person(s) taking photographs of site;
 - Inquiries by unknown persons that are believed to be suspicious;
 - Aircrafts that are low flying over the site;
 - Drones that are spotted as flying over or in near proximity to the site;
 - Vehicles that are unknown or unoccupied that are parked in near proximity to the site;
 - Bomb threats that include verbal threats received or the discovery of an unknown or suspicious package on site;
 - Visitors at Trans Mountain sites are not permitted under any circumstances to interact with protestors. This includes verbal or physical interactions. In the event that a visitor is blocked by a protest or protestor from entering or exiting site, the visitor is required to back up and leave the area if it is safe to do so or if it is unsafe to back up and leave the area, put the vehicle in park and lock the doors and windows. Visitors shall not attempt to drive through or around any protest activity.
- The protection of information plays a key role in the security of Trans Mountain sites. Visitors to site shall abide by the following information security procedures and expectations:

- Contractors should exercise discretion in discussing proprietary information in public places where conversations can be easily overheard.
 - Proprietary information, in any form, should be handled and stored in a manner which ensures its security.
 - Care should be taken to protect documents, conversations, and information posted in public view from visitors to Company offices.
- All sites and facilities have site specific security plans (SSPs) developed. The SSP is designed to mitigate and manage security threats and risks. For questions regarding the contents of the SSP of the site you are visiting, please contact the site manager or supervisor.

Section 36: Small Tools (Power, Air and Hand Tools)

36.1 GENERAL INFORMATION

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

36.2 KEY REQUIREMENTS

36.2.1 Power, air, and hand tools must be in good working condition. Replace worn tools immediately.

36.2.2 Remove damaged or frayed cords from service. Do not hoist or lower tools by the cord or hose.

36.2.3 Do not use power tools if safety equipment such as shields, tool rests, hoods, and guards have been removed or rendered inoperative.

36.2.4 As stated in the Job Hazard Assessment (or Workplace Hazard Assessment), contractor must wear identified PPE when using tools.

36.2.5 Ground electrically powered tools by ground-fault-circuit interruption devices.

36.2.6 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 37: Stop Work Authority

37.1 GENERAL INFORMATION

37.1.1 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.

37.1.2 *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.

37.2 KEY REQUIREMENTS

37.2.1 Work must be stopped when:

- Any Contractor brings attention to an unsafe act or condition.
- An unsafe condition could result in an undesirable event.

37.2.2 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.

37.2.3 Most issues can be adequately resolved in a timely fashion at the job site.

37.2.4 Any reprisal against a person using stop work authority because that individual, in good faith, stopped work is strictly forbidden.

Section 38: Training

38.1 GENERAL INFORMATION

38.1.1 The Contractor shall assure that personnel have an appropriate level of competence in terms of education, training, knowledge and experience.

38.1.2 All Contractor employees must meet minimum safety awareness level training requirements, known as the CORE components of Midstream TQ (Training Qualifications), within ISN.

38.1.3 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.

38.1.4 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.

38.2 KEY REQUIREMENTS

38.2.1 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.

38.2.2 Detailed safety meetings must be conducted at least once per week.

38.2.3 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.

38.2.4 Company Representatives/Inspectors may attend these meetings to evaluate their value and improve two-way communications.

38.2.5 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.

38.2.6 Contractor must be able to provide documentation of training and/or qualification for individuals assigned to specific tasks. This must be available at the site and documented utilizing a Company accepted method.

Section 39: Underground Utility Locating (One Call)

39.1 GENERAL INFORMATION

Line hits can impact the general public, additional pipeline owner-operators and Company operations. Contractors have a legal and contractual requirement to complete the One - Call process.

39.2 KEY REQUIREMENTS

39.2.1 THE EXCAVATOR IS RESPONSIBLE FOR HAVING ALL UTILITIES LOCATED AT THE SITE.

39.2.2 One - Calls are a mandatory notification requirement. This allows underground facility owners to identify their facilities before excavation occurs. This potentially avoids the damage, injury or service disruption that can occur by an excavator digging into underground facilities. These facilities include, but are not limited to, electrical lines and pipelines carrying natural gas, liquid petroleum products, water and sewage.

39.2.3 Excavators are required by law to notify applicable One - Call Centers at least three working days (Canada) or two working days (US) in advance before starting an excavation project or otherwise applicable state requirement.

39.2.4 All utility lines on or near the job site must be identified and marked at this time using flags, spray paint, or both. Survey the area for identifiers such as pipeline line markers, depressions or other indicators of underground utilities.

39.2.5 Once utilities are marked, respect the demarcations and dig carefully in their proximity. Always expose underground installations by a safe and acceptable method. It may be necessary to excavate by hand in congested areas such as pump stations or when underground utility locations are unknown. Review available detailed underground facilities drawings before beginning an excavation. While the excavation is open, protect, support, or remove such installations to safeguard employees.

39.2.6 Always call One-Call before beginning an excavation project. Every digging project, no matter how large or small, no matter what the location, warrants a One - Call. Example digging projects include tasks as simple as installing a mailbox, building a deck, planting a tree or more complex tasks such as major road or building construction.

39.2.7 Depending on the location in relation to the excavation, a Company Representative may be required at the job site to monitor excavation activity and can help determine the most appropriate digging method. Alert Company if work crews will be crossing the right-of-way with motorized equipment or vehicles.

39.2.8 If you accidentally damage or hit the Company pipeline or damage a pipeline marker, contact the Company immediately. All dents, scrapes or other damage need to be assessed and repaired to prevent a future leak or serious accident.

Section 40: Vehicles – Heavy Equipment (Mobile Powered)

40.1 GENERAL INFORMATION

40.1.1 Inspect, test, and certify vehicles and heavy equipment brought on site to be in safe operating condition. The certification documentation must be available for review.

40.1.2 Contractor equipment operators must be licensed or certified to operate equipment. Certification is required for crane operations, power industrial trucks, and others as applicable. Training documentation must be current and operator certification documentation must be readily available upon request of Company Representative.

40.1.3 Contractor shall provide trained spotters/flaggers in sufficient numbers, whenever heavy equipment is being utilized near existing property and/or congested areas.

40.2 KEY REQUIREMENTS

40.2.1 All Contractor personnel must have the proper commercial driver's licenses to operate equipment on public roadways.

40.2.2 Special permission by Company is needed for vehicles to enter restricted areas such as dike areas.

40.2.3 Contractor must be transported to and from the job site in a safe manner. Each passenger must have adequate seating. Standing up in a moving vehicle is strictly prohibited. While on Company right of ways riding in the back of a pick-up or similar truck that has not been equipped with adequate seating is prohibited. Seat belts must be worn by driver and all passengers while on public roadways.

40.2.4 Observe all posted speed limits and traffic regulating signs. Only drive on designated roads or rights-of-way.

40.2.5 Reckless driving and horseplay is prohibited.

40.2.6 Mobile Equipment Operation:

- Only properly trained, qualified personnel are permitted to operate equipment or machinery.
- Contractor is prohibited from operating Company owned equipment or machinery, with the following exceptions;
- This does not include Contractor personnel considered to be temporary workers or Company Representatives;
- Company Facility Managers may waive this prohibition if operational needs require.
- Company workers are prohibited from operating Contractor owned equipment or machinery. **This does not apply to equipment the Company rents.

40.2.7 Contractor must ensure all warning signs, rated load capacity charts, recommended operating speeds and other information is available for all mobile heavy equipment.

40.2.8 Audible back-up alarms must be correctly installed and maintained on Contractor equipment.

40.2.9 Contractor shall secure and/or remove keys from all vehicles and mobile equipment remaining on the right-of-way without supervision or security.

40.2.10 Spotters/flaggers must be trained to understand the proper signs, symbols, hand signals used in direct communication with a vehicle or equipment operator.

40.3 ALL-TERRAIN VEHICLES (ATV) AND UTILITY VEHICLES (UTV)

40.3.1 ATV's and UTV's include any motorized off highway vehicles having a bench or seat to be straddled by the Contractor and a handlebar or wheel for steering control.

- Where ATV/UTV's are utilized, a daily JHA must be written and reviewed.
- Under no circumstances may Contractor use three-wheeled ATVs.

- All ATVs and UTV's must have proper warning placards (general safety requirements, weight capacities, and tire pressures assigned by the manufacturer) affixed to them.
- Seat belt use is required on UTV's if the vehicle is equipped with them.
- Unless allowed by local traffic laws, do not operate ATVs and UTV's on public roads or public drives.
- PPE must be worn when operating an ATV/UTV including:
 - A DOT, Snell, CSA or ANSI approved helmet with face shield and/or impact resistant goggles.
 - Long sleeved shirt and long pants.
 - Leather, heavy cotton, or Company issued work gloves.
 - Other PPE that may be required for the working conditions.
- Safety toe shoes/boots (steel/composite toe or approved toe caps).

40.3.2 All Contractors operating ATVs and/or UTV's must complete a safe operations training course.

40.4 CONTRACTOR TRANSPORTATION DRIVERS

40.4.1 Contractor transportation drivers associated with any construction project entering a Company premises must receive a Driver Safety Orientation. Utilize CSM-009 (Canada/US) or site/project specific form for documentation.

40.4.2 A "Driver" is defined as: Any Contractor who will be operating a vehicle including loading or unloading of a vehicle/trailer at the job site without performing additional work. (This does not include delivery services such as UPS or FEDEX).

40.4.3 In the US, drivers are required to obtain and hold a CDL for the proper vehicle class being operated.

40.4.4 Any violations of Company Policy, posted signs, or the law while operating a motor vehicle may result in immediate dismissal of the Driver or the Contractor from a Company project. Examples of issues resulting in immediate dismissal from a Company project include:

- Being under the influence of alcohol or controlled substance.
- Leaving the scene of an accident
- Speeding
- Driving recklessly.
- In the US, driving a CMV without a CDL in the driver's possession.
- Not completing required inspections as outlined.
- Not maintaining equipment to recognized standards. (NOTE: At any time, a Company Representative can question the quality of the equipment being used on the project. If the equipment is deemed unsafe, it may be tagged out of service and not allowed to operate on the project).

40.5 STEEP SLOPE DESCENT PLAN AND VEHICLE WINCHING

40.5.1 A Safety Plan must be provided to give direction and instruction for the winching of vehicles both up and down steep slopes. (Steep Slopes are classified as 12% or greater in grade.) These slopes will be identified prior to actual work beginning.

Section 41: Water/Dock Safety

41.1 GENERAL INFORMATION

Contractors working on marine docks or at risk of falling into water must be protected from the fall utilizing the proper fall protection equipment and/or must use a Canadian General Standards Board (CGSB) Transport Canada approved or United States Coast Guard (USCG) approved personal floatation devices.

Section 42: Welding Safety

42.1 GENERAL INFORMATION

42.1.1 Contractor must follow approved, site-specific procedures for welding, cutting, and heating. If no site-specific procedures exist, Contractor must develop procedures using guidelines in this section.

42.1.2 Contractor must meet all requirements related to welding safety and compressed gas cylinders.

42.2 KEY REQUIREMENTS

42.2.1 Contractor personnel performing welding and cutting must be qualified and trained in accordance with applicable standards and be thoroughly familiar with potential hazards and precautions necessary to ensure safety.

- Grinder guards are required on all abrasive grinding wheels.
- Double face protection including a face shield and safety glasses must be used when hoods or pancake hoods are not in use.

42.2.2 Mechanical Plugs, air bags, aqua-gel mud packs, dry ice, spheres or other approved sealants must be used to prevent flammable atmospheres/air mixtures from contacting possible sources of ignition (e.g., grinding, brushing, beveling). **Warning:** Mechanical plugs or air bags are not pressure holding devices and must not be used as pressure plugs. Air bags may not be approved for use in all business units.

42.2.3 Mechanical plug requirements:

- Extend the vent to an adequate location away from the work area to prevent possible ignition.
- Do not install anything that restricts or narrows the inner diameter of the hose or piping.
- Use a reinforced vent hose to prevent hose crimping, which would restrict venting.
- Ensure pressure gauges and related openings are free from obstructions. Verify ounce / millibar gauge accuracy before each use. If any pressure builds up, immediately declare the area unsafe and eliminate the pressure before resuming work.

Section 43: Work Clothing

43.1 GENERAL INFORMATION

Long-sleeved shirts and long pants are required at all times. Where hazards exist due to moving parts on machinery or equipment, maintain clothing and hair to avoid entanglement.

43.2 KEY REQUIREMENTS

Wear special work clothing where exposure to fire, extreme heat or cold, corrosive chemicals, electrical hazards, body impacts, cuts from handled materials or other specialized hazards are possible. See the premises or business unit's site-specific requirements for any additional needs, such as Fire-Retardant Clothing (FRC). Contractor shall supply special work clothing, ensure it is in good condition, and worn properly.

Section 44: Worksite Safety

44.1 GENERAL INFORMATION

44.1.1 Contractor shall inspect each work area at the beginning of each shift, and periodically thereafter, to maintain safe working conditions.

44.1.2 Contractor shall provide illumination bright enough for work to proceed safely.

44.1.3 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.

44.1.4 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.

44.1.5 If the English language is a communication barrier, Contractor at its expense shall timely convert/translate the Company Contractor Safety Manual accurately into the appropriate language for its employees and subcontractors.

44.2 KEY REQUIREMENTS

44.2.1 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.

44.2.2 Lightning within 10 km 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.

44.2.3 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.

44.2.4 Contractors will adhere to a wind speed limit of 65 km / 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.

44.2.5 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. 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.

44.2.6 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.

44.2.7 No animals, except for service animals, are allowed on Company premises.

44.2.8 The use of cell phones, including hands free devices, PED's, text messaging and emailing while driving is strictly prohibited. The use of a cell phone or Personal Electronic Device (PED) is prohibited while driving on any Company premises or Right of Way.

Section 45: United States – DOT – Operator Qualification (OQ)

45.1 GENERAL INFORMATION

45.1.1 Hiring Managers and Contractors can access a full list of OQ covered tasks on the Company OQ Website.

45.1.2 Contractor performing Company defined OQ-covered tasks must be qualified to perform such tasks or be directed and observed performing such covered tasks by a qualified individual.

45.1.3 The Hiring Manager may use non-mandatory Exhibit A: Operator Qualification (OQ) Contractor Compliance Checklist to assist with Company OQ documentation requirements.

45.1.4 Exhibit A applies to any contract involving performance of tasks identified in Company's OQ Program as OQ covered tasks. Exhibit A applies ONLY to the OQ component.

45.2 KEY REQUIREMENTS

45.2.1 New construction is not covered by the OQ regulation. However, almost every new construction project will tie into an existing pipeline system, and OQ covered tasks will be involved for the tie-in and any subsequent work on the new segment after it is tied in.

45.2.2 Contractor must submit an OQ Action plan for review to the ISN Contractor database. The OQ Action Plan Elements is located on The Company's website.

45.2.3 Contractor OQ action plans must be reviewed and approved by the Company's OQ Administrator prior to performing OQ covered tasks.

45.2.4 Contractor must submit employee ISN OQ reports to the appropriate Company ISN jobsite indicated on the OQ Action Plan Template. The Contractor must also provide a hard copy of the workers ISN OQ report at the jobsite as required by Appendix E of the Company's Corporate OQ Plan.

45.2.5 Contractor must supply a daily roster of OQ covered task workers to a Company representative unless the roster of OQ covered task workers does not change from day to day during the project.

46.2.6 The OQ orientation must be documented on CSM-003 or equivalent.