Occupational Health and Safety Standards for Prime/General Contractors (Cdn-US-Mex)

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to assist prospective Prime/General Contractors in the development of their own project specific safety documentation by providing TransCanada's minimum performance expectations and standards with respect to the occupational health and safety (OHS) aspects associated with the Work.

Note: Throughout this document, **"Shall"** will be used to identify regulatory and/or TransCanada requirements that must be complied with, and **"Should"** statements are recommendations that are not mandated, but may be implemented based upon the scope of the project and associated risks.

1.2 Scope

This Standard does not stipulate the specific measures Prime/General Contractors are required to adopt in order to comply with applicable laws, acts, regulations and/or codes. It is the Prime/General Contractor's sole responsibility to ensure that all applicable OHS Requirements have been identified and are complied with in the performance of the Work associated with the Contract. By providing these minimum requirements, TransCanada is not assuming control over OHS nor agreeing to correct deficiencies.

Prospective Prime/General Contractors are advised to carefully review all OHS Requirements and the contents of this document to ensure that they have identified and addressed the applicable components relevant to the nature and scope of the Work. Any questions regarding the meaning or interpretation of this document should be directed to the TransCanada Authorized Representative as identified in the Contract.

Definitions of terms and references that are used throughout this document can be found in Section 2 of this document.

2.0 OCCUPATIONAL HEALTH AND SAFETY DOCUMENTATION

2.1 Prime/General Contractor's OHS Policy

The Prime/General Contractor shall provide TransCanada with its written OHS Policy as signed, dated and endorsed by the Prime/General Contractor's management as part of its submission. The Prime/General Contractor will also provide TransCanada with written confirmation that its OHS Policy is, and will be, widely disseminated and understood by all Work Site personnel. This OHS Policy shall be in the official language(s) of the jurisdiction in which the Work is being carried out by the Prime/General Contractor.

2.2 Prime/General Contractor's Corporate OHS Management System or Program

As part of its submission, the Prime/General Contractor shall provide TransCanada with its written Corporate OHS Management System or Program which shall meet or exceed all relevant statutory and industry standards.

2.3 Project/Site Specific Safety Plan

The Prime/General Contractor shall develop a Project/Site Specific Safety Plan (P/SSSP) for the Work. The P/SSSP must meet and/or exceed any applicable OHS legal requirements and the standards set out in this document.

For the purposes of the Prime/General Contractor's submission, the Prime/General Contractor shall submit a detailed draft P/SSSP to TransCanada for review and acceptance by a TransCanada Authorized Representative, a minimum of thirty (30) days prior to mobilization and before the start of the Work. An alternative schedule may be acceptable provided there is agreement by the Project Management Team. A final version of the P/SSSP shall be signed off by the Prime/General Contractor prior to Work commencement and a copy shall be made available to its personnel and provided to TransCanada and Subcontractors. Review and comment by TransCanada on the P/SSSP will not result in the transfer of any responsibility or liability for OHS of the Work to TransCanada. Once reviewed, accepted and signed off, the P/SSSP shall be included as part of the Contract documents for the Work.

Prime/General Contractor shall review, update and communicate changes to the P/SSSP(s) throughout the duration of the Work to ensure all reasonably foreseeable OHS risks and exposures are proactively identified, assessed and appropriately managed. Revisions to the P/SSSP shall be reviewed by a TransCanada Authorized Representative.

DEFINITIONS AND ABBREVIATIONS

Definitions and Abbreviations	
Term / Abbreviation	**Definition / Description**
ANSI	American National Standards Institute
Contract	A legally binding document (Agreement) between two or more parties to provide specific materials or services.
CSA	Canadian Standards Association
Job Safety Analysis (JSA)	A systematic process that breaks down a job into a sequence of steps, identifies hazards in each step, evaluates the actual and potential risk of the hazard and establishes risk control measures.
Occupational Health and Safety (OHS) Requirements	Occupational Health and Safety Requirements include permits, codes, rules, acts, regulations and directives.
Off-Road Vehicle	**Off-Road Vehicle** means vehicles designed and used for access into and transportation across surfaces where road vehicles including 4-wheel drive trucks and sport-utility vehicles (SUVs) could not operate. This includes, but is not limited to, all-terrain vehicles (ATV), quads, utility task vehicles (UTV), snowmobiles, side by sides, amphibious vehicles, etc.
OHS Requirements	All laws, statutes, rules, regulations, directives, codes, guidelines, orders, permits and licenses by any authorized authority, including federal, provincial, municipal or local government, or regulatory body, as applicable.

Definitions and Abbreviations	
Term / Abbreviation	**Definition / Description**
Prime/General Contractor	Employer responsible for Work Site/Workplace safety (Re Guidelines and Instructions for Use of the Safety Management Plan). Means a Contractor that is: The designated "Prime Contractor" (British Columbia, Alberta, Manitoba, Saskatchewan), "Constructor" (Ontario) or where the Contractor has control of the Worksite whether as an "employer" (Worksite regulated by the Canada Labour Code, Part II), "Principle Contractor/Maitre D'oeuvre" (Quebec), "Contractor" (New Brunswick), or a "controlling employer," "creating employer," "exposing employer," or "correcting employer" (United States) for Occupational Health and Safety (OHS).
Project Hazard Analysis	Process for identifying safety hazards based on scope of work, plans, as-built drawings, weather conditions, environmental considerations, actual physical site assessments.
Safety Representative	Employee of the Prime/General Contractor assigned to represent all Work Site personnel on a day-to-day basis to assist with meeting OHS requirements on the Work Site and promoting OHS and loss prevention principles. Applicable where number of Work Site personnel is 20 or less.
Site Safety Lead	In addition to the duties of the Safety Representative, the Prime/General Contractor's Site Safety Lead is the Prime/General Contractor's designated employee who applies the expertise gained from a study of safety science, principles, practices and other subjects and from professional safety experience to create or develop procedures, processes, standards, specifications and systems to achieve optimal control or reduction of the hazards and exposures that may harm people, property, or the environment. Applicable where number of Work Site personnel is greater than 20.
Standards	Statements or explanation of the generally accepted, mandatory or minimum courses of action, and may include specific limits, specifications or tolerance levels
Subcontractor	Any person, firm or corporation contracting with the Prime/General Contractor to perform part of the Work, including partners and associates in a Joint Venture contracting with the Prime/General Contractor. It does not include those who supply only goods, transportation, materials or equipment.
TransCanada Authorized Representative	Person or persons designated to act on behalf of TransCanada to manage the scope of Work performed by contractors for facilities maintenance and construction in accordance with the terms, conditions and specification of the contract.
Work	All activities concerning the project contemplated by the Contract.
Work Site	A location where an employee, contractor or personnel is, or is likely to be, engaged in any occupation and includes any vehicle or mobile equipment used by an employee in an occupation. Note: The entire area required for the performance of the Work, including rights-of-way and temporary work space, as required.

3.0 PRIME/GENERAL CONTRACTOR'S ROLE AND RESPONSIBILITIES

In addition to all other responsibilities set out in this TransCanada Standards document and the Contract, the Prime/General Contractor's responsibilities include, but are not limited to:

- Identify, assess and implement effective operational controls to manage the OHS risks and exposures associated with the performance and execution of the Work;
- Coordinate, organize and oversee the performance of all Work and the OHS programs of all employers and Subcontractors at the Work Site to ensure that no person is exposed to unacceptable risks to their health and safety;
- Control and overall responsibility for OHS at the Work Site including, but not limited to, the protection of the general public and protection of all Work Site personnel including those workers employed by:
    - TransCanada;
    - the Prime/General Contractor;
    - any Subcontractors;
    - any suppliers; and,
    - any other contractors.
- Adhere to and enforce the requirements of the TransCanada Safety Management Plan (SMP);
- Maintain all safety programs including any relevant certification if applicable;
- Maintain Workers Compensation Board (WCB) proof of good standing (i.e. Clearance Certificate), or jurisdictional equivalent (i.e. Mexican Social Security Institute - IMMS), if any, throughout the duration of the Work;
- Protect and preserve TransCanada's property and the property of all third parties on, along, adjacent to, or near the Work Site from damage resulting from the performance of the Work, including exercising suitable precautions necessary to prevent property damage;
- Ensure all organizations and individuals attending the Work Site comply with and implement duties imposed upon them under all applicable OHS Requirements;
- Monitor activities at the Work Site to ensure that the OHS program is functioning properly and provide such records as TransCanada may require for verification that the OHS program is functioning. This shall include items such as key performance indicator reporting, incident trending, project close-out reporting, etc.; and,
- Receive from each employer (e.g. Subcontractors) at the Work Site the name of the person that has been designated to supervise the employer's workers at the Work Site.
- The Prime/General Contractor must ensure that the supervisor(s) have received specific training for their duties and have proven competency in regards to the execution of their duties. (e.g. Trenching and any ground disturbance supervisor(s), coordinator, etc. The Prime/General Contractor must ensure that appropriate personnel have current ground disturbance training and have been trained to meet the requirements outlined in the TransCanada Excavation Specification Document.
- It is the responsibility of the Prime/General Contractor to ensure they have reviewed and trained all workers to carry out the duties within the scope of work as per the requirements contained in all the documents applicable to the scope of work and contracts agreed upon.

4.0 PROJECT/SITE SPECIFIC SAFETY PLAN

The P/SSSP must set out in appropriate detail how the Prime/General Contractor intends to undertake OHS management of the Work. The Prime/General Contractor is required to develop its P/SSSP in accordance with the TransCanada P/SSSP template and submit the P/SSSP to TransCanada a minimum of 30 days prior to Work commencement or mobilization for review and acceptance. The P/SSSP must include the following:

4.1 Assignment of Responsibility

- Prime/General Contractor's chain of command for safety matters (e.g. organization chart, safety resource strategy);
- Outlines mandatory responsibility requirements;
- Name, title and duties of persons responsible for all safety activities at the Work Site(s)
  - may include Site Safety Lead/Inspector(s) and/or Safety Representative(s) positions as required by legislation and/or the nature of the Work;
  - include rationale for designations (number of Work Site personnel, risk assessment, etc.) and proof of qualifications (certifications and experience);

  Note: Qualifications for Site Safety Lead/Inspectors and Safety Representatives are included in Appendix A)
- Identification of who has "Stop Work" authority;
- Designated point(s) of contact for safety information;
- Designated contact for communication with TransCanada Authorized Representative;
- Prior to Work commencing, all foremen, supervisors and personnel should be made aware of the requirements outlined in the P/SSSP.

4.2 Pre-Work Activities

- In certain circumstances, the Prime/General Contractor may require a General Work Permit from TransCanada where TransCanada's facilities may be affected by the Work, i.e. pipeline isolation, hydro-testing, gas handling, switching and tagging, temporary work spaces, crossing agreements, shore pulls, etc.
- Proposed means of conducting and updating the Project Hazard Analysis to identify, evaluate and safely control hazardous conditions associated with the Work and the Work Site.

4.3 Review of Safety Requirements

- Review and address all Work specific OHS Standards (see Section 5).
- Establish safety performance standards for the Work.

4.4 Planning Work

- Identify Work Site and Right-of-Way (ROW) requirements based on scope of Work and Project Hazard Assessment such as: proposed traffic flow, hazardous materials, training, inspections, security, personal hygiene, emergency response planning and mutual aid, procurement of Subcontractors, appropriate tools, equipment and materials.
- Identify how and when JSAs and/or hazard assessment(s) for specific activities will be developed.

4.5 Mobilization

- Describe how the Prime/General Contractor proposes to have the appropriate resources on-site or in place prior to scheduled start date; for example, job trailer(s); permits, site plans, drawings and construction files; equipment, materials and tools; signs and barriers, fences, barricades; appropriate safety and job procedures manuals; safety files and posters; copies of applicable OHS Requirements; training records and certifications; PPE; emergency response equipment and supplies.

4.6 Orientation and Training

- Identify the system or program used to determine the selection, placement, training and ongoing assessment of the qualifications, abilities and competencies of all personnel required to meet the Work Standards, including:
- Training Matrices
- Mandatory OHS orientation for all Work Site personnel;
  - Identification of trained Work Site personnel (e.g. hard hat stickers or cards, "Green Hands" program, etc.);
  - Training record-keeping system;
  - TransCanada HSE Field Orientation for external contractors (applicable only where Work is being completed at an existing TransCanada facility (available online at http://tc.icomproductions.ca);
  - Excavation training where applicable (available on line at http://tc.icomproductions.ca);
  - All regulatory and industry standard safety training requirements.
- When required by law, only qualified trainers with the ability to issue certificates of completion shall be used.
- See Appendix B for examples of safety training requirements that may be applicable to the Work.

4.7 Operational Controls

- Provide general and specific safety programs, practices and procedures to mitigate the OHS risks and exposures associated with the Work.
- See Appendix C for examples of specific OHS programs, practices and procedures that may provide operational control.
- For the purposes of the Work, OHS programs, practices and procedures must meet all OHS Requirements and the Standards set out in Section 5.
- Safe work plans must be developed, reviewed and accepted by TransCanada for all high risk activities (e.g. Confined Space, Lockout/Tagout, Working at Heights etc.) prior to commencing these activities.

4.8 Subcontractor Safety Management

- Prime/General Contractor's procedures and criteria for the pre-qualification, selection, pre-job preparation, on-site monitoring and post contract performance feedback of Subcontractor provision of services.

4.9 Participation and Communication

- Describe how the Prime/General Contractor proposes to have appropriate Work Site personnel participation and effective communication regarding OHS matters. For example: joint committee meetings, tailgate meetings, daily/weekly supervisory meetings; weekly safety meetings; pre-job safety meetings; newsletters; bulletin boards for posting policies, procedures and other safety information. Communication must be delivered in a format understood by all Work Site personnel.

4.10 Inspection/Periodic Evaluation/Audits

- Describe how the Prime/General Contractor will monitor and measure safety performance, identify and implement preventive and corrective measures when required and review the on-going suitability, effectiveness and adequacy of the P/SSSP. This may include:
  - Informal and formal documented safety inspections;
  - Audits;
  - Hazard identification systems; and,
  - Identify the frequency of audits and inspections.

4.11 Incident Management

- Describe how the Prime/General Contractor will integrate its system for incident management with TransCanada's Incident Management Process (see Appendix D for details).
- The information provided by the Prime/General Contractor's incident management system must be transferable and translatable to the TransCanada Incident Management Process.
- Plan for investigation and reporting of all serious, major and critical incidents as well as imminent danger situations and how the Prime/General Contractor will assist Subcontractors with investigations, when required.
- Procedures for regulatory reporting.
- The Prime / General Contractor shall report all incidents to a TransCanada representative including Near Hits within 24 hours of the incident occurrence or sooner depending upon severity.
- The Prime / General Contractor shall outline reporting requirements for daily, weekly and monthly reports.

4.12 Emergency Preparedness and Response Plan

- Provide emergency preparedness and response plan for the Work and the Work Site. The plan shall outline in detail:
  - Key personnel, their responsibilities and contact information;
  - Means of tracking all Work Site personnel for communication purposes;
  - Emergency equipment and emergency supplies (first aid provisions, fire extinguishers etc. in accordance with regulatory requirements);
  - Equipment inspection procedures;
  - Fire prevention procedures (extinguisher inspections schedules, storage requirements for flammable and combustible substances, hazard identification etc.);
  - Safe shutdown and start up procedures;
  - Notification and reporting procedures;
  - Evacuation plan – including muster points, third party emergency response information, etc.;
  - 24-hour emergency communication link;
  - Return to work procedures;
  - Emergency Checklists;
  - Plans for training, drills and exercises and for ensuring emergency information is readily available to all Work Site personnel (emergency numbers posted by all telephones, etc.); and,
  - Where the Prime/General Contractor is performing duties on a TransCanada Operational Facility or ROW, the Prime/General Contractor will ensure its emergency response plan includes notification to the TransCanada site representative.

4.13 Documents and Records

- Outline Prime/General Contractor's proposed reporting and recordkeeping procedures regarding:
  - Implementation of the P/SSSP by personnel involved with the Work or Work Site;
  - Required certifications and permits (WCB/IMMS or equivalents)
  - Job Safety Analysis reports;
  - Tailgate meetings;
  - Investigation reports; and,
  - Training and competency records, fit testing, calibration records, etc.
- Provide for monthly OHS reporting to TransCanada including KPI's, the number of hours worked and kilometres or miles driven by all Work Site personnel.
- All documents and records will be subject to audit by TransCanada at any time during the performance of the Work and after completion of the Work in accordance with Contract requirements.

5.0 OHS STANDARDS

For the purposes of the Work to be contracted and completed by the Prime/General Contractor, the following Standards must be met by the Prime/General Contractor through its P/SSSP and related OHS programs, practices and procedures.

5.1 Personal Protective Equipment

5.1.1 Eye Protection

Eye protection meeting the most current CSA Standard for Eye and Face Protectors or the most current ANSI standard for Occupational and Educational Personal Eye and Face Protection.

5.1.2 Hearing Protection

Hearing protection when noise levels are at or above 85 dBA (dual hearing protection in areas where noise levels are 105dBA or greater) that meets, at a minimum, the most current standards for Hearing Protection in the jurisdiction in which the Work is being conducted. Hearing protection shall have a minimum noise reduction rating (NRR) of 27 dBA.

5.1.3 Head Protection

Side Impact Hardhat(s) are required and shall meet, at a minimum, the most current standards for Protective Headwear in the jurisdiction in which the Work is being conducted.

5.1.4 Footwear

Footwear meeting at a minimum the most current ASTM, CSA Standard or Mexican NOM for Protective Footwear, sole puncture protection with a Grade 1 protective toecap. All footwear must be high cut above the ankle (minimum 15 cm or 6 inch measured from the top of the sole), and shall have aggressive soles with flexible treads.

5.1.5 Work Wear - General Clothing Requirements

Loose fitting work wear and jewelry must not be worn near machinery or equipment where it may become entangled. Similarly, loose long hair must be tied back when working on or near machinery or equipment where it may become entangled.

- Clothing requirements for general wear at field sites includes:
- 100% tight weave cotton, wool, silk or aramid. Clothing made from synthetic blends (e.g. nylon, polyester) is not acceptable for use.
- Shirts with long or short sleeves and long leg trousers must be worn at all times.
- Muscle shirts, singlet's, tank tops, open toed shoes, sandals and hoodies are not acceptable on any TransCanada Work Site or ROW.
- Personnel are not permitted to wear hoodies on all TransCanada Work Sites as these garments are worn under the hard hat and have been known to block or distract the wearer's view, specifically their peripheral view. Parka hoods are acceptable as long as the hood is worn above the hard hat and the hood is positioned on the head where it does not interfere with the wearer's visibility. Parka hood strings/cords must be removed to avoid being caught in rotating/moving equipment.

5.1.6 Fall Arrest Systems / Working at Height

Fall restraint and protection systems for Work conducted at or above a height of 2.4 meters or 8 feet in Canada and 1.8 meters or 6 feet in the U.S and Mexico. Fall arresting safety harnesses and lanyards to meet the most current ANSI/ASSE Fall Protection Systems for Construction and Demolition Operations and the most current ANSI or CSA Standard. Shock absorbers are to meet the most current CSA Standard for Energy Absorbers and Lanyards

5.1.7 Respiratory Protection

Only NIOSH approved respiratory protective equipment to be selected and used to complete the Work. Respiratory equipment shall meet, at a minimum, standards for Selection, Use, and Care of Respirators in the jurisdiction in which the Work is being performed.

5.1.8 Flame Resistant Clothing

Flame Resistant Clothing shall be worn where "hot work" is occurring or where the potential for fire and/or explosion exists. Outermost layer of clothing to be made of flame resistant fabric meeting the NFPA 2112 Standard for Flame-Resistant Garment for Protection of Industrial Personnel Against Flash Fire. The garment shall have an affixed label which states at a minimum the garment meets NFPA 2112. In addition, all flame resistant garments must be laundered as per the specific garment's manufacturers specifications.

Protective Rainwear will state the following requirement for Rain Suits:

- FR Rainwear worn for flash fire protection shall be compliant to ASTM F2733 and shall state so on the interior label of the garment.
- FR Rainwear worn for arc flash protection shall be compliant to ASTM F1891 and shall state so on the interior label of the garment.

5.1.9 Hand Protection

The Prime/General Contractor shall provide protective hand-wear appropriate for potential hazards associated with Work-related tasks. Protective hand-wear requirements will be based on the project/task hazard assessment.

Specially insulated gloves meeting the requirements of the most current ANSI/ISEA Standard for Hand Protection Selection Criteria to be selected for Work involving electricity over 600 volts.

5.1.10 Safety Visibility Vests

High visibility safety vests and clothing must meet, at a minimum, the standards within current CSA Standards and the US Department of Transportation Federal Highway Administration (FHWA) Part VI of the Manual on Uniform Traffic Control Devices (MUTCD - current edition).

5.1.11 Welders

Welders shall use CSA Z94,3-02 or ANSI Z87.1 2015, welding hood at all times when welding. Welder's helpers shall use face shields in combinations with safety glasses when face hazards, such as flying debris are present during welding operations.

Note: Pancake welding helmets are not approved for use and shall not be permitted on any TransCanada Worksite.

5.2 Overhead Power lines

Identify all overhead power lines and erect signage and install guards (Goal posts) at all overhead power line locations with appropriate 48 to 72-hour advance notice to the affected electric utility company.

The Prime/General Contractor shall meet or exceed the requirements contained in TransCanada's Overhead Powerline Specification. Where applicable, this specification will be included with the Contract.

5.3 Excavations and Trenches

The Prime/General Contractor shall meet or exceed the requirements contained in TransCanada's Excavation Specification. Where applicable, this specification will be included with the Contract.

5.4 Steep Slopes

The Prime/General Contractor shall meet or exceed the requirements contained in TransCanada's Steep Slopes Specification. Where applicable, this specification will be included with the Contract.

5.5 Temporary Access Roads

The Prime/General Contractor shall meet or exceed the requirements contained in TransCanada's Temporary Access Road Specification. Where applicable, this specification will be included with the Contract.

5.6 Marking of Facilities

The color code convention used to mark ROWs and buried facilities must meet or exceed the American Public Works Association (APWA) Uniform Color Code and the most current ANSI Safety Color Code standard for buried facilities in addition to any applicable regulatory requirements.

5.7 Drug and Alcohol/Fit for Duty Program

The Prime/General Contractor must have an alcohol and drug policy that:

- Sets out fitness for work expectations, including how safety sensitive roles will be determined;
- Establishes pre-site access testing for all individuals accessing the Work Site, where applicable and jurisdictionally required;
- In jurisdictions where pre-site access is permitted, the pre-site access testing shall be conducted no more than 120 days prior to site access;
- Outlines pre-employment, reasonable cause and post-incident testing requirements;

- Details the procedure for administering alcohol and drug testing and the method to be used for analyzing results; and,
- Addresses contractor and Subcontractor requirements.

Managed Camps

- At the Prime/General Contractor's (i.e. Camp Service Provider) discretion, consumption of alcohol may be permitted for guests only where an approved alcohol consumption facility (bar) has been established in the camp and in the guest's private room.
- All guests must agree to and abide by "Camp Rules & Regulations" upon initial check-in to the facility which will specify rules on general behaviour and consumption of alcohol and/or drugs.

5.8 Control of Hazardous Energy

The Hazardous Energy Control procedure shall, at a minimum, meet or exceed the standards of the most current ANSI/ASSE Safety Requirements for the "Lock Out/Tag Out" of Energy Sources in addition to any applicable regulatory requirements.

5.9 Confined Space

The confined space procedure shall, at a minimum, meet or exceed the standards of the most current ANSI/ASSE Safety Requirements for Confined Spaces in addition to the applicable regulatory requirements.

5.10 Radiography

A radiographic safe work procedure is required and will meet or exceed the following minimum requirements:

- No single person units are permitted at the Work Site;
- Barricades or warning devices to identify radiography is in progress; and,
- Radiographic inspection trucks are to be equipped with 360-degree amber rotating lights on top of the unit clearly visible to all Work Site personnel. Lights will be turned off when radiography is not in progress.

5.11 Rollover Protection Structure

The Prime/General Contractor's Heavy Mobile Equipment or equivalent policy, procedure or program shall include the following minimum requirements for Pipe Laying Equipment:

- Pipe layers or side boom tractors must be fitted with a rollover protection structure (ROPS) designed, engineered, installed and certified to meet the applicable ISO, SAE, CSA or OSHA standard.
- The ROPS must be permanently marked with the manufacturer's or professional engineer's name and address; model and serial number; the make and model or series number of machines the ROPS is designed to fit; maximum weight of machine the ROPS is designed for; and identification of the standard to which the ROPS was designed, manufactured and installed.
- All ROPS must be inspected for defects and damage on an annual basis. Equipment must be fitted with seat belts that meet the applicable SAE standard and restraining devices to prevent the displacement of the battery if the equipment turns over.

5.12 Motor Vehicle Operation

The Prime/General Contractor's Motor Vehicle Operation (or equivalent) policy, procedure or program shall align with TransCanada's Motor Vehicle Operation Standard. This is to be captured in the SMP / SSSP created

by the Project Management Team and the Prime/General Contractor, and shall include, at a minimum, the following requirements:

- Motor vehicle operations training requirements.
  - The project motor vehicle operating training requirements will be based on the identified risks associated with the project as determined by the Project Management team. The risk assessment will evaluate and determine:
    - The extent of when, how and who will require various levels of driver training for a project, both in class, on line and in vehicle, will be determined by the project management team; and,
    - Appropriate training to be in place for drivers that tow trailers, operate articulating vehicles and/or operate vehicles with a Gross Vehicle Weight over 4500 kg (10,000 lbs).
- Contractor and Subcontractor motor vehicle operation requirements;
- A driver situational awareness section to reduce vehicle impacts (e.g. 360º Program);
- A parking practice that meets project requirements;
- Reporting and investigation protocols for vehicle related incidents to support the improvement of the motor vehicle operation program;
- Electronic device policy. The use of electronic communication devices, including hands-free, is to be prohibited while operating a motor vehicle on behalf of TransCanada or a TransCanada project;
- Corrective actions for personnel who demonstrate high risk driving behaviours.

5.13 Off Road Vehicle (ATV's, UTV's etc.)

The Prime/General Contractor's Off-Road Vehicle or equivalent policy, procedure or program shall meet or exceed TransCanada's Off-Road Vehicle Operation requirements as provided in TransCanada's Motor Vehicle Operation Standard, and will include, at a minimum, the following requirements:

- All Off-Road Vehicles must be legally registered where required by provincial, state or federal law.
- Operator training, which includes a competency assessment process, must be in place for personnel that operate off-road vehicles (I.e. ATV's, UTV's, snowmobiles).
- Passengers are only permitted on straddle seating type Off-Road Vehicles when the vehicle is designed to carry both a driver and a passenger. The only exception is in the event of an emergency or breakdown.
- Seatbelts/life restraints must be worn at all times in Off-Road Vehicles equipped with seatbelts/life restraints.
- Vehicles without seatbelts/life restraints should be used only as a last resort.
- Vehicles transporting Off-Road Vehicles must be equipped with loading ramps that can be secured to the transporting vehicle to prevent slipping during loading and unloading. The ramps must be sufficiently sized and capable of supporting the weight of the Off-Road Vehicle to be loaded and have a surface which provides adequate traction for the Off-Road Vehicle.
- All Off-Road Vehicles must be secured to the transport vehicle during transportation. Operators shall inspect the transport vehicle and the Off-Road vehicle for loose debris that may present hazards to other traffic prior to transport.

- The Operators manual for Off-Road Vehicles must be kept clean in a secure place with the vehicle or at another location readily accessible to the operator and passengers to review prior to operating.
- All personnel driving or riding Off-Road Vehicles must wear helmets meeting CSA Standard D230 or SNELL with visor or goggles and bearing Department of Transport (DOT) certification, and have successfully completed the training for Off-Road Vehicle use.
- Winches must be equipped with a bell or similar stopping device that prevents the hook from being pulled into the rollers.
- Prior to the operation of an Off-Road Vehicle, a JSA or similar form of hazard assessment must be completed to ensure the hazards have been identified and the proper controls are implemented. This assessment will determine the need for buggy whips, communications etc.

5.14 Hoisting and Conveying Equipment / Powered Industrial Trucks

Specific requirements regarding hoisting and conveying equipment (e.g. side booms, cranes, manlifts), and powered industrial trucks (e.g. forklifts, mobile cranes) are provided in a separate Schedule to the General Conditions (GC) to the Contract. The Prime/General Contractor should refer to the separate Schedule of the Contract for these specific requirements.

5.15 Scaffolds and Elevated Work Platforms

The Prime/General Contractor's Scaffolding or equivalent policy, procedure or program shall include the following minimum requirements for erecting scaffolding:

- Scaffolds shall be erected, inspected and dismantled by competent personnel.
- Personnel must be trained in the use, maintenance, inspection or building of scaffolds.
- The Work area must be assessed for hazards (e.g. overhead power lines) in which the scaffold is to be erected.
- Scaffolds and planks must be inspected prior to use to ensure they are maintained in good condition.
- Inspect daily, before use, and following any modifications.
- Upright supports must be placed on firm foundations or sills.
- All pins and braces must be locked into position.
- Work platforms shall meet regulatory requirements; and will be fully decked. Planks must be secured to prevent movement in any direction.
- All openings / hatchways must be barricaded to prevent falling and/or unauthorized access.
- Flexible materials such as cables, chains, and are not to be used in the guardrail system
- Guard rails (top and mid-rail) and toe boards must be in place.
- Ensure the minimum toe board height is 125 mm (5 in) in Canada (Exception is Alberta which requires the toe board height to be a minimum of 140 mm (5.5 in)) and no gaps exist between the toe board and the scaffold platform
- Ensure the minimum toe board height is 4 inches (100 mm) US / Mexico and no gaps exist between the toe board and the scaffold platform
- Toe boards must be in place on all sides
- Toe boards may be omitted at the access opening/s
- Note: In the event the gap is greater than 6 mm (0.25 in), employees may mitigate the risk to persons working below the elevated platform by conducting a JSA and erecting a visual barrier and signage.

- Fall protection equipment must be worn if the installation of guard rails is impractical and if scaffolding is more than 2.4 metres (8 feet) in Canada and 1.8 metres (6 feet) in US / Mexico above the ground or floor.
- Note: Fall arrest systems cannot be attached to a scaffold framework unless specified by the manufacturer or approved by a professional engineer licensed in the jurisdiction where the work is being conducted.
- Wheel locking devices or use blocking must be engaged when employees are on scaffold.
- If scaffolding exceeds the height by three times the smallest dimension / base, ensure it is supported by outriggers and / or secured by tying to a permanent fixture.
- Ensure safe access and egress is attached to scaffolding work platform.
- Scaffolding must be of sufficient strength and rigidity to support four times the weight of personnel and material to which it will be subjected.
- Personnel shall not remain on the scaffold while it is being moved due to the potential for falling.
- Personnel shall not work on scaffolds during storms or high winds.
- For extensive scaffolding requirements (i.e. engineering design; whenever scaffolding is to be erected over three sections and out-riggers are required), contract a professional scaffolding company. In the event an outrigger scaffold is being erected and / or used, then an inspection tagging process must be followed:
  - a. A green tag with "Safe for Use", to indicate it is safe for use
  - b. A yellow tag with "Caution: Potential or Unusual Hazard", to indicate the presence of a potential or unusual hazard (no barrier at one end due to configuration of structure being worked around)
  - c. A red tag with "Unsafe to Use", to indicate it is unsafe to use (e.g. while still in the process of being erected)
- Scissor and Boom Lifts are to be operated and inspected following manufacturer's specifications and training provided by vendor.

5.16 Cell Phone and Personal Communication Devices

Unless authorized, the use of cellphones and/or other personal devices is strictly prohibited while on active Work Sites. The prohibition of the use of cell phones and/or other personal devices includes, but is not limited to; sending or receiving calls, text, instant, messaging, SMS, browsing the Internet, sending or receiving email, checking phone messages and having phone conversations.

Individuals who violate this policy may be subject to disciplinary action, up to and including removal from the Work site/project.

5.17 Safety Stand Downs / Work Stoppages

TransCanada personnel and its contractors can address unsafe acts and conditions or trends through a safety stand down (Stand Downs). In order to ensure these Stand Downs are effectively addressing the issues, well implemented, and understood, refer to Appendix E for additional guidance. The guidance will include factors to consider in implementing a Stand Down, including: criteria for initiating a Stand Down, communication, escalation, and, identifying and following up on action plans.

5.18 Equipment and Vehicle Positive Air Shut-offs

When deemed necessary through the use of the Prime/General Contractor's hazard assessment processes, diesel powered vehicles and equipment working on or near facilities or areas where hazardous atmospheres may develop shall be equipped with spark-arresting muffler, catalytic converter and/or positive air shut-offs.

The Prime/General Contractor's equipment and vehicle operating or equivalent policy, procedure or program shall include the following minimum requirements:

- The use of a hazard assessment in determining positive air shut-off equipment requirements;
- Confirmation of the functionality of positive air shut-off equipment prior to entering hazardous areas; and
- Inspection, testing and maintenance pursuant to the schedule outlined in its procedure and/or in accordance with manufacturer's specifications.

5.19 Medical Surveillance and Monitoring (Industrial Hygiene and Occupational Health)

The Prime/General Contractor shall have a policy, procedure or program that addresses legislative and regulatory requirements and standards applicable to industrial hygiene and industrial health (e.g., respiratory and breathing protection, blood-borne pathogens, respirable silica / crystalline dust exposure, audiometric monitoring, surveillance and conservation).

5.20 Firearms

The P/SSSP shall strictly prohibit firearms in vehicles or on any Work Site, including camps, unless specifically authorized in writing by TransCanada.

5.21 Wildlife Management

The Prime/General Contractor shall have a Wildlife Management policy, procedure or program in place which mitigates the hazards associated with aggressive wildlife that may be present in the area(s) where Work will be taking place. The program will include a written site/location specific hazard assessment of potential threats and controls associated with the potentially dangerous wildlife that may be encountered by personnel performing Work for the project(s).

The potential control measures may include and are not limited to the following controls: schedule planning to reduce interface and conflict, food waste control and management, barriers, deterrents, wildlife monitors, etc.

If an evaluation identifies that Wildlife Monitors are required, they may be armed with wildlife deterrents up to and including firearms. The Prime/General Contractor must ensure the Wildlife Monitor has, at a minimum, the following training and certification:

Training and Certifications

Individuals who fulfill roles as Wildlife Monitors must have the following training and certifications:

- Possession and Acquisition License (PAL), where applicable
- Proof of completion of a Firearm Safety Certificate or equivalent
- First Aid Level 1 or more advanced
- ATV/Snowmobile Operation (when applicable)
- Wildlife Monitor Training/Certification including Firearms Proficiency (when firearm use is implemented)

- Written procedures, policies and practices

If the evaluation indicates that firearms are necessary, they will only be deployed by the Wildlife Monitor. These Monitors will undertake no other duties other than those associated with monitoring and protecting workers and animals from aggressive encounters.

Deterrents such as bear bangers, pepper spray and firearms require training, written procedures as well as Director level sign off.

NOTE: Pets are prohibited at TransCanada managed facilities, pipelines and Work Sites.

Background Check (proof required)

- Criminal record check must not contain any convictions of violent crime

5.22 Working on Ice

The Prime / General Contractor shall develop a Safe Work Plan when crossing or working on ice that meets or exceeds the Government of Alberta Work Safe Alberta "Best Practice for Building and Working Safely on Ice Covers in Alberta" (Publication Number SH010 and ISBN 978-0-7785-8735-5).

5.23 TransCanada's Life Saving Rules

The Prime/General Contractor is responsible for ensuring that all personnel are informed of TransCanada's Life Saving Rules and that these rules are complied with at all times.

TransCanada's Life Saving Rules:

- We will drive safely and without distraction
- We will use the appropriate Personal Protective Equipment
- We will conduct a pre Job Safety Analysis (JSA)
- We will work with a valid work permit when required
- We will obtain authorization before entering a confined space
- We will verify isolation before work begins
- We will protect ourselves against a fall when working at heights
- We will follow prescribed lift plans and techniques
- We will control excavations and ground disturbances

Expectations:

- Everyone shall follow the Life Saving Rules;
- No work variances will be given for work that falls under a Life Saving Rule;
- Work should be planned far enough in advance to ensure plans/systems are in place to allow all personnel to adhere to the Life Saving Rules;
- In the event a task cannot be completed in compliance with one of the Life Saving Rules, the work must stop, be re-assessed and a revised work plan developed and submitted to the TransCanada Authorized Representative for review and acceptance prior to commencing or continuing Work;
- Effective and timely solutions shall be developed when conditions arise that prevent compliance with Life Saving Rules;

- All personnel are expected to intervene if they notice a job that is in planning or underway without due consideration and compliance with the Life Saving Rules;
- Everyone shall accept intervention where there is non-compliance with one or more Life Saving Rules.

Consequences:
Individuals who violate the Life Saving Rules may be subject to disciplinary action, up to and including termination by a TransCanada Representative, without prior notification or approval by the Prime/General Contractor.

6.0 HOURS OF WORK

This standard sets out TransCanada's requirements respecting maximum allowable hours of work and consecutive days of work. For the purposes of the Work, the Prime/General Contractor shall ensure the standard is followed by all Work Site personnel. It is the Prime/General Contractor's sole responsibility to ensure all applicable legal requirements are met.

Note: In the event that this standard exceeds the maximum hours of work or consecutive days of work prescribed by any applicable federal, provincial, state and local legislation, the applicable legislation shall govern.

The Prime/General Contractor shall ensure that Work Site personnel do not perform work at the Work Site for more than 12 consecutive hours in any one 24-hour period including travel time. Work Site personnel must be given a minimum 8 hours' rest in any 24-hour day.

In the case of Emergency Work, the total number of hours must not exceed 16 consecutive hours including travel time. Emergency Work is defined as any activities directly related to and necessary to address the impacts of a sudden, unusual, unforeseen, or unpreventable occurrence that is either seriously interfering with, or could seriously interfere with the Work.

Subject to prescribed limitations in any applicable legislation, Work Site personnel may be scheduled to work up to a maximum of 24 consecutive days. Following 24 consecutive days of work, personnel must be given at least four consecutive days of rest (the equivalent of one day off for each workweek). As a general practice, Prime/General Contractor personnel will be scheduled to work no more than six consecutive days with one day off in a seven-day workweek.

Examples of extended work schedules between 12 and 24 consecutive days are:

- 6 consecutive days worked requires 1 consecutive day off; or,
- 12 consecutive days worked requires 2 consecutive days off; or,
- 18 consecutive days worked requires 3 consecutive days off; or,
- 24 consecutive days worked requires 4 consecutive days off.

Hours of work in excess of those set out in this standard require an amendment to the standard or change order in accordance with the notice provisions of the applicable Contract. Any such amendment is subject to the prior approval of TransCanada's senior management and to any applicable regulatory limitations or requirements. In granting its approval, the Company reserves the right to impose additional fatigue management requirements including tracking and reporting requirements.

7.0 APPENDICES

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APPENDIX A – QUALIFICATIONS FOR SITE SAFETY LEAD AND SPAN OF INFLUENCE

For the purpose of the Work the Prime / General Contractor shall have a strategy that addresses legislative and regulatory requirements applicable to span of influence and control. The Prime / General Contractor shall provide qualified safety resources to deliver effective safety oversight on the Project and to verify that OHS aspects associated with the Work are functioning adequately. The Prime / General Contractor shall develop a monitoring and oversight strategy that demonstrates how the adequacy and effectiveness of its OHS program will be maintained throughout the lifecycle of the Project. The Prime / General Contractor shall staff the Project in accordance with the Prime / General Contractor's safety resource qualifications and span of influence/control guidelines and as identified through the Contract terms and conditions.

Prime/General Contractor key safety resources must be qualified and accepted by the Company prior to assignment to the project.

Safety resourcing strategy items for consideration:

- Level of field safety presence expected by Company and contractor to monitor / manage a proactive safety culture;
- A dedicated, experienced and qualified Safety Representative for each Work location and scheduled shift (e.g. Back-Shifts, Night Shifts etc.) unless the location allows for a qualified Safety Lead to cover several sites within the day;
- Legislated Span of Influence/Control where applicable and per the Prime / General Contractor's safety resourcing strategy;
- A minimum one (1) qualified designated safety representative to be provided by the Prime / General Contractor's safety resourcing strategy for the first 20 workers where high risk Work is involved and any additional qualified safety resources as deemed necessary and agreed upon by the Prime/General Contractor and the Company;
- Additional qualified safety representatives as deemed necessary and agreed upon by the Prime / General Contractor and the Company;
- Work schedules;
- Number of Work personnel;
- Geographic location(s);
- Length of spread / size of facility;
- Project risks;
- Prime / General Contractors safety performance.

Site Safety Lead – Qualifications

Education:

- At a minimum, must hold an Occupational Health and Safety certificate, diploma and / or degree from a recognized educational institution.

Experience / Knowledge:

- Familiarity with applicable federal, state and / or provincial occupational health and safety legislation, regulations and codes.

- A minimum of 10 years of working experience in the construction of heavy industrial, oil, gas and/or power plant facilities or equivalent training.
- At least3 years of continuous occupational health and safety experience.
- Knowledge of any potential or actual danger to health or safety at the Work Site.
- Competent in hazard assessments, conducting investigations and use of investigation tools (e.g. Cause/ Effect, TapRoot®, etc.).
- Competent in conducting Health and Safety Program Audits.
- Specifically trained in and / or equivalent experience with one or more of the following CSTS, PSTS, STEP, OSHA 40 Hour.
- Certification and appropriate trade tickets / government certifications where required by regulation (i.e. Canadian Registered Safety Professional (CRSP), Certified Industrial Hygienist (CIH), Associated Safety Professional (ASP), Certified Safety Professional (CSP), etc.

Recognized Qualifications:

- In Canada, a Canadian Registered Safety Professional (CRSP), Registered Occupational Hygienist (ROH) and / or Registered Occupational Hygiene Technologist (ROHT).
- In the US, an Occupational Health and Safety Technologist (OHST), Associate Safety Professional (ASP), and / or Certified Safety Professional (CSP).

In addition to the above, the following competencies are required:

- Hazard Assessment;
- Inspection;
- Incident Investigation;
- Report Writing;
- Root Cause Analysis;
- Incident Trending;
- Auditing

Note: the following Jurisdictional Requirements:

- In the province of Quebec, a certification issued by the Ministère du Travail, de la Main-d'oeuvre et de la Sécurité de Revenue is required for a Construction Safety Officer.
- In the province of Ontario: The Health and Safety Awareness Training for Workers and Supervisors is required (http://www.labour.gov.on.ca/english/hs/training/).

APPENDIX B –SAFETY TRAINING REQUIREMENTS

Tunnels, Shafts, Caissons, and Cofferdams	Motor Vehicle Control – Driver Training
Supervision	Traffic Control
Scaffolds	Signaler
Hazardous Materials (WHMIS / GHS)	Helicopter
Pipeline Repair	Propane
Explosive-actuated Fastening Tool	Formwork
Drowning Protection	Elevating Work Platforms
Chainsaw	Compressed Air
ATV	Forklift Operations
Construction Safety Association Health and Leadership Safety Training	Rigging Safety
Collision Avoidance	Ground Disturbance
Excavation and Trenching	Pipe and Cable Locating
Confined Space Entry and Rescue	H2S Alive or equivalent
Welding and Cutting	Working at Heights
Crane Operations	Hearing Conservation
Industrial Hygiene	Ergonomics
Defensive Driver	Radiation Safety
Scaffolding	Emergency Response
Electrical Safety	Respiratory Protection
Personal Protective Equipment	Lock-out and Tag-out Systems
Standard First Aid and CPR	Substance Abuse Systems
Fire Fighting and Suppression	Transportation of Dangerous Goods
Safe Work Permit or Permitting / Work Authorization	Hazard Identification, Assessment and Control
Hazard Communication	Reporting (hazards, spills, incidents and near hits)
	Working Alone

Note: Training requirements are based on jurisdictional requirements, the project risk register, company policy, and the Work. Accordingly, not all requirements will be required for all projects or Work.

Driver Training consisting of: in-class theory, in-vehicle training / coaching and driver evaluation is required for those who operate a motor vehicle on behalf of TransCanada or a TransCanada Project where the motor vehicle operator interacts with the public (e.g. highways, haul roads, etc.) or those who drive on a frequent basis.

APPENDIX C – EXAMPLES OF PROGRAMS FOR OPERATION CONTROL

Confined Space	Blood-borne Pathogens
Hazard Communication	Workplace Hazardous Materials Information System (WHMIS) / Global Harmonization System (GHS)
Personal Protective Equipment (PPE)	Safe Work Permits (Hot Work, Confined Space, etc.)
Motor Vehicle Operation	Control of Hazardous Energy (LOTO)
Heavy Mobile Equipment	Warning Signs, Tag and Barriers
Housekeeping	Mobile Cranes
Overhead Powerlines	Heat and Cold Stress
Lifting, Hoisting, Winching and Towing	Ergonomics
Occupational Noise	Machine Guarding
Hand and Power Tools	Welding, Cutting and Brazing
Flammable and Combustible Materials	Handling and Storage of Compressed Gas Cylinders
Sanitation	Camps
Manual Material Handling and Lifting	Work Platforms, Scaffolds and Ladders
Excavations, Trenching, Shafts, Underground Works and Ground Disturbance	Foreign Line Crossings
Explosives and Blasting	Diving
Traffic Control and Site / Journey Management	Working Near or Above Water
Hazardous Materials Exposure (Asbestos, Pb, Hg, PCB)	Radiation Safety
Transportation of Dangerous Goods	Hearing Conservation
Drugs and Alcohol / Fit for Duty	Electricity
Cranes and Boom Trucks	Fitness to Work
Working at Height	Security
Demolition	Naturally Occurring Radioactive Materials (NORMS)

APPENDIX D - OUTLINE OF TRANSCANADA'S INCIDENT MANAGEMENT PROCESS

TransCanada's Incident Management Process includes response, notification, investigation, documentation and follow-up procedures for all incidents. Incidents are categorized and responded to in accordance with the Safety Incident Response Table on the following page.

All incidents related to Work Site personnel must be reported immediately and a documented preliminary report must be submitted to TransCanada's Authorized Representative within 24 hours of occurrence. In cases of critical, major high potential incidents, or near hits with the potential to have been critical or major, Prime / General Contractors shall verbally notify the TransCanada Authorized Representative immediately of the incident. Where instructed, the Prime / General Contractor will submit a formal written incident investigation report to TransCanada within 30 days or such other period stipulated by TransCanada. The Prime / General Contractor will be responsible for reporting the incident to the applicable regulatory authority for health and safety in accordance with applicable provincial or federal law. In addition, the Prime / General Contractor shall cooperate and provide all requested information to assist TransCanada's parallel investigation of any incident.

The Prime / General Contractor's Site Safety Lead or Safety Representative shall have access to all reports maintained at the Work Site. The Prime / General Contractor is required to investigate and report the incident to any applicable regulatory agencies in accordance with regulatory requirements.

The Prime / General Contractor will regularly update TransCanada's Authorized Representative on the status of follow-up actions associated with addressing the root causes identified in an incident investigation report.

An incident investigation report shall contain, at a minimum, the following information:

- Date, time and place of the incident;
- Investigation team;
- Incident description including:
  - Role(s) of worker(s) and extent of injuries;
  - Name of hospital and / or doctor where injured worker was treated and a classification of the incident;
  - A description of any policies, programs, procedures, practices and / or legislation / regulation contravened, if applicable;
  - Circumstances and sequence of events surrounding the incident; and,
  - Any other pertinent observations.
- Identification of any causal factors and root cause(s); and,
- Recommendations for corrective action(s) and corresponding Corrective Action Plan.

NOTE: The purpose of incident investigation is to determine Causal Factors, Root Cause(s), Corrective Measures, developing a Corrective Action Plan which includes the implementation of corrective measures with accountable parties and associated timelines for implementation

SAFETY INCIDENT RESPONSE TABLE

	Loss Criteria						
Category	Public Consequence	Consequence in Terms of Worker Safety	Environmental Consequences	Consequences in Terms of Production Losses	Consequences in Terms of Property Damage	Incident Outcome	Near Hit Outcome
Critical	Life threatening injuries, illnesses or death	Life threatening injuries, illnesses or death	Adverse effects that requires emergency response, mitigation costs exceeding $500,000	More than six months	Damage exceeding $500,000	Construction Shut Down Crew Shut Down	Crew Shut Down Crew time Out
Major	Medical treatment injury with hospitalization or health effects	Medical treatment injury with hospitalization or health effects	Adverse effects, mitigation costs of $25,000 - $500,000	Between one and six months	Damage costing $100,000 - $500,000	Crew Shut Down Crew Time Out	Crew Time Out Tailgate
Serious	Medical treatment injury or verified exposure to hazardous chemicals effects	Medical treatment injury or verified exposure to hazardous chemicals effects	Mitigation costs of $5,000 - $25,000	Between one week and one month	Damage costing $25,000 - $100,000	Tailgate Tailgate	Trend Trend
Minor	First aid injury or no health effects	First aid injury or no health effects	Mitigation costs of less than $5,000	Less than one week	Damage costing less than $25,000	Trend Trend	Trend Trend

Notes:

Trend:	Daily reporting and analysis of all incidents and near hit construction items by Prime/General Contractor.
Tailgate:	Affected crew holds tailgate meeting next day prior to construction start-up to discuss/prevent incident or near hit.
Crew Time-Out:	Affected crew holds tailgate immediately following incident or near hit.
Crew Shut-Down:	Affected crew must shut down immediately following incident or near hit. Work resumes at Prime/General Contractor's discretion.
Construction Shut-Down:	All crews must shut down operations immediately following incident. Work resumes at Prime/General Contractor's and TC discretion.
Progressive Disciplinary Process	1. Issue discussed with party responsible; 2. Written warning of repeat violation; 3. Suspension without Pay 4. Dismissal.

APPENDIX E – SAFETY STAND DOWN GUIDANCE

Scope of Stand Down	Considerations for Stand Down	TransCanada personnel to be notified	Contractor personnel to be notified	Communication	Considerations for Start-up
Multiple Spreads / Sites	• Critical event that impacts the entire job / multiple spreads / sites. • Systemic issue that impacts multiple spreads / sites.	Vice President / Sr. VP / Executive VP	Vice President / President	• If > 1 d, Executive should be notified and should be on site • Communication to full Work Site; consideration for how to coordinate to minimize impacts via travel, traffic, etc.	• Action plan in place and being implemented. • Any actions that have been identified as being required prior to start-up must be completed and documented. • Work resumes at Prime/General Contractor's and TC discretion.
Full Spread / Site	• Critical event that impacts a full spread / site • Systemic issue that impacts the full spread / site.	Vice President	Vice President	• If > 1 d, Executive should be notified and should be on site • Communication to full Work Site; consideration for how to coordinate to minimize impacts via travel, traffic, etc.	• Action plan in place and being implemented. • Any actions that have been identified as being required prior to start-up must be completed and documented. • Work resumes at Prime/General Contractor's and TC discretion.
Multiple Work Fronts	• Critical event that impacts multiple work fronts. • Systemic issue that impacts multiple work fronts.	Director	Director	• At minimum, a conference call between Prime/General Contractor and TransCanada (at various levels) should take place	• Action plan in place and being implemented. • Any actions that have been identified as being required prior to start-up must be completed and documented. • Work resumes at Prime/General Contractor's and TC discretion.
Single Work Front (e.g., welding; lowering-in; tie-ins)	• Critical event that impacts multiple work fronts. • Systemic issue that impacts multiple work fronts.	Construction Manager	Superintendent	• Meeting between site management should be held; • Tailgate meeting with crew should be held.	• Action plan in place and being implemented. • Any actions that have been identified as being required prior to start-up must be completed and documented. • Work resumes at Prime/General Contractor's discretion.
Any work activity	• Right, responsibility and obligation to refuse and report work they consider imminently dangerous to the environment, property, personnel or the general public; • Right to know what the workplace health and safety hazards are, appropriate precautions to take, and procedures to follow in the event of an incident; • Right to participate in the Work Site health and safety program; and, • Right to protection from retaliation for exercising their rights.	All Personnel	All Personnel	• Straw boss / foreman, superintendent and construction manager should be informed.	• Review of issue to ensure all hazards and concerns have been addressed • Another JSA is required that addresses the concern / hazard • All actions deemed necessary to ensure the work is safe • Work resumes at Prime/General Contractor's discretion.

The arrow indicates the flow of information / communication; the communication should immediately happen at the level of the decision and at least one level above (i.e., an employee stopping work should immediately communicate to his / her supervisor; the Super / Construction Manager should communicate to the Director level). OHS legislation provides that all personnel have the right, responsibility and obligation to shut-down any work they consider to be imminently dangerous to the environment, property, personnel or the general public.