



Item ID#: 1018079073 **Rev. #**: 02 **Driver**: Regulatory

Canada Gas Operations Emergency Response Plan (CAN)

APPROVALS

Approvals were captured electronically and attached to the published document.

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Document Owner	Manager, Emergency Preparedness and Response
Manager	Emergency Management
Business Unit	
Endorsement	Manager, CGO Safety and Emergency Management
	Canada Gas Operations
Approver	
	Vice President
	Canada Gas Operations

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LATEST REVISION

This revision includes routine administrative and organizational updates, as well as the following improvements:

- Incorporation of more specific external notification requirements.
- Incorporation of specific guidance for transition of incident management by ICS to routine Operations.
- Incorporation of references to the Critical Injury and Fatality Response Procedure where appropriate.

REVISION HISTORY

The Revision History table captures a high-level summary of the five most recent versions (Rev. No.) of this document and the signoffs obtained for each revision.

	Revision History					
N/-	Date (YYYY-MMM- DD)	Document Status	Brief Description of Change History	Originator	Reviewer(s)	Approver(s)
02	2022-Dec-01	Published	Annual document review and update.			
01	2021-Dec-01	Published	Document updates 2021			
00	2020-Nov-03	Published	This is a new document.			

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	Plan Holders					
Copy No.	Plan Holder	Core	Annex RZ1 Wildrose	Annex RZ2 Rocky Mtn	Annex RZ3 Central	Annex R4 Eastern
01	Vice President, CDN Gas Operations	✓	✓	✓	✓	✓
02	Director, Wildrose Region	✓	✓			
03	Director, Rocky Mountain Region	✓		✓		
04	Director, Central Region	✓			✓	
05	Director, Eastern Region	✓				✓
06	Emergency Preparedness Coordinator, RMR & Wildrose Regions	✓	✓	✓		
07	Emergency Preparedness Coordinator, Central & Eastern Regions	✓			✓	✓
08	Control Centre Manager, Gas Control Center	✓	✓	✓	✓	✓
09	Emergency Management Specialist CGO Single Point of Contact	✓	✓	✓	✓	✓

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 $Additional\ copies\ of\ this\ ERP\ may\ be\ located\ at\ Operational\ Facilities\ with\ Tier\ 3\ response\ reference\ documents; those\ copies\ shall\ be\ updated\ in\ concert\ with\ the\ Tier\ 3\ response\ reference\ documents.$

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PROGRAM MANAGEMENT

Facility Information and Modifications

General Information		
Facility Name	Canada Gas Operations	
Owners Name	TC Energy	
Address	Physical Address: Operator's Address:	
Mainline Number (24 hour)	888-982-7222	
Plan Contact	Specialist, Emergency Management	

TC Energy facility addresses have been redacted from this section.

TC Energy employee names have been redacted from this section.

Regulatory Cross Reference

Regulation	Regulation				
Code	Description/Summary Location in				
SOR 99-29	SOR 99-294				
32	Emergency Management Program				
32 (1)	The company shall develop, implement and maintain an emergency management program that anticipates, prevents, manages and mitigates conditions during an emergency that could adversely affect property, the environment or the safety of workers or the public.				
32 (1.1)	A company shall develop an emergency procedures manual, review it regularly and update it as required.	1.3, 8			
32 (2)	A company shall submit the emergency procedures manual and any updates that are made to it to the Board.	8			
33	A company shall establish and maintain liaison with the agencies that may be involved in an emergency response on the pipeline and shall consult with them in developing and updating the emergency procedures manual.	5			
34	A company shall take all reasonable steps to inform all persons who may be associated with an emergency response activity on the pipeline of the practices and procedures to be followed and make available to them the relevant information that is consistent with that which is specified in the emergency procedures manual.	6			

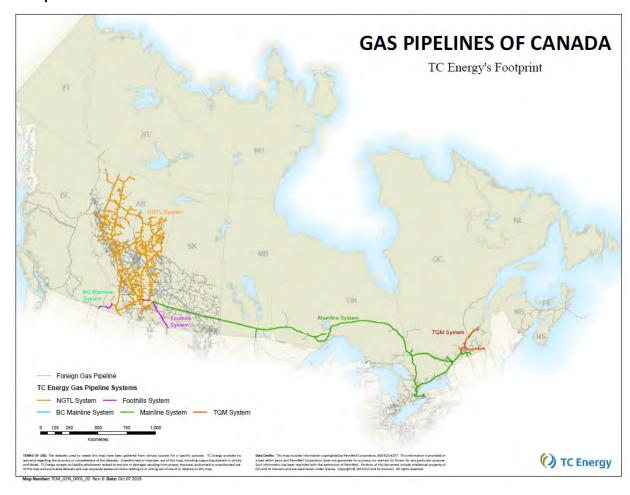
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Gas Pipelines of Canada



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Acronyms and Definitions

Definitions and Abbreviations			
Term / Abbreviation	Definition / Description		
CEOC	Corporate Emergency Operations Center (Calgary, AB)		
CGO	Canada Gas Operations (a TC Energy Business Unit)		
CRC	Canadian Regulatory Compliance (a TC Energy Support Department)		
CSA	Canadian Standards Association		
EOC	Emergency Operations Center		
EPC	Emergency Preparedness Coordinator		
EPZ	Emergency Planning Zone		
ERP	Emergency Response Plan		
ESD	Emergency Shut-Down		
ESDC	Employment and Social Development Canada		
IAP	Incident Action Plan		
ICS	Incident Command System		
IMAT	Incident Management Assistance Team		
IMT	Incident Management Team		
MEAA	Mutual Emergency Assistance Agreement		
NGTL	Nova Gas Transmission Line		
NPS	Nominal Pipe Size (inches)		
OPR	Onshore Pipeline Regulations		
PPE	Personal Protective Equipment		
REOC	Regional Emergency Operations Center		
TQM	Trans Quebec and Maritimes Pipeline		

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1 INTRODUCTION

A critical aspect of operating TC Energy's pipeline systems is to have a comprehensive Emergency Management Program. A key component of the Emergency Management Program includes having Emergency Response Plans for all operational assets. This Plan is the Emergency Response Plan (ERP) applicable to all TC Energy (hereafter, "Company") owned and/operated natural gas pipelines in Canada.

This Plan is distributed to key internal and external stakeholders and available to all Company personnel through a secure internet portal hosted by the Company; the portal is internally referred to as the Controlled Documents Library.

The Canadian Gas Operations Emergency Response Plan (hereafter, the CGO ERP) is combined with a rigorous training and exercise program; and maintenance program making emergency response for the Canadian Gas Operations a priority fully endorsed at all levels within the Company.

1.1 Purpose

The purpose of this CGO ERP is to assist Company personnel in responding safely to emergencies originating from the pipeline and associated facilities. The Plan provides techniques and guidelines for achieving an efficient, coordinated, and effective response to emergencies which may occur along the pipeline.

The specific objectives of the Plan are to:

- 1. Define notification, activation, and mobilization procedures to be followed when an emergency occurs.
- 2. Identify the response management system and define the roles and responsibilities of response team members.
- 3. Define organizational lines of responsibility to be adhered to during a response operation.
- 4. Document equipment, manpower, and other resources available to assist with the response.
- 5. Explain how Company's Emergency Management Program is applied to Canadian Gas Operations.

1.2 Overview of the Response Plans

The Emergency Management Corporate Program Manual is the overarching document that describes the emergency preparedness process at the Company. The Emergency Management Corporate Program Manual and all its contents applies to CGO. This Tier 2 CGO ERP more specifically defines how emergency response is conducted within CGO.

This CGO ERP is organized into eight (8) sections, augmented with five (5) Response Zone Annexes, and supported by hundreds of Tier 3 response reference documents.

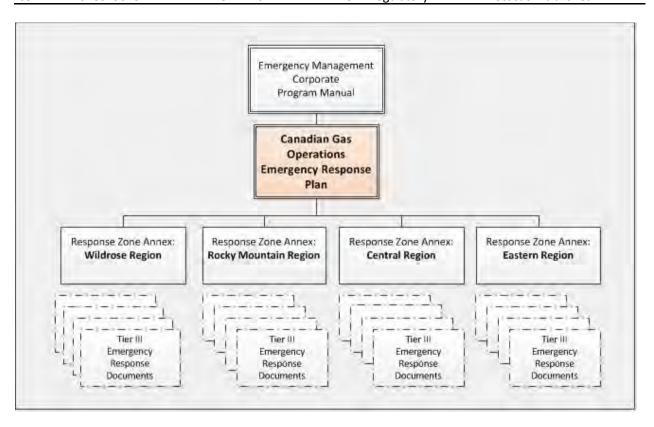
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1.2.1 Tier 1 Corporate Program Manual

TC Energy's Tier 1 Plan is the Emergency Management Corporate Program Manual. There is only one Tier 1 Plan in the Company, as an over-arching program manual. The Emergency Management Corporate Program Manual describes TC Energy's Emergency Management Program and the processes which apply to all lines of business within the Company. It rarely contains specific tactics, resource inventories, or procedures for use during response; moreover, the Program Manual serves to guide Facilities, Regions, and Support Departments in developing and executing emergency preparedness activities within their area of responsibility.

1.2.2 Tier 2 Emergency Response Plan

This Plan is designated as the Tier 2 ERP for the Company's CGO assets. This ERP augments the overarching Emergency Management Corporate Program Manual by providing preparedness and response guidance tailored specifically to CGO; therefore, all Emergency Management Program requirements per the Emergency Management Corporate Program Manual also apply to CGO.

This Plan provides the information and guidance necessary for an operating area within CGO to prepare and respond to an emergency situation. The procedures developed in this Plan include the organization and effective utilization of available manpower, material, equipment, and outside resources to assure prompt and effective response to an emergency situation.

1.2.3 Tier 3 Response Reference Documents

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Tier 3 Documents are maintained in concert with this ERP to provide a mechanism for preservation of the most detailed and fluid response information, such as pipeline maps, drawings, and descriptions; and specific contact information for emergency notifications.

The Regional Emergency Preparedness Team (EPT) is responsible to assemble and maintain Tier 3 documents in accordance with the <u>Tier 3 Response Reference Maintenance Procedure</u> (1017375940). All Tier 3 documents must reside within the Emergency Management folder within OpenText, accessible at OpenText Content Server (tcpl.ca).

1.3 **Scope**

This Plan is applicable to all Company owned and/operated natural gas pipelines in Canada. This Plan is an all-hazards Plan for any emergencies impacting natural gas pipelines.

Descriptions of the pipelines are detailed in Section 2 (Facility Description) of this Plan with additional information provided in the Response Zone Annexes.

1.4 Legal Authority

This Plan has been developed in accordance with the regulation published in the Statutory Orders and Onshore Pipeline Regulations (OPR) (SOR)/99-294, S. 32-35 – Emergency Management Program and applicable Canadian Standards Association (CSA) standards; however, compliance to these regulations is accomplished or demonstrated through the Emergency Management Corporate Program Manual.

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2 **FACILITY DESCRIPTION**

2.1 **Description of Site**

The Company's Canadian Gas Pipeline System is approximately 56,600 km (35,200 miles) of wholly owned pipeline, and 572 km (355 miles) of partially owned pipeline. The wholly owned pipelines include these systems:

- Nova Gas Transmission Line (NGTL), which is 24,544 km (15,251 miles) and receives, transports, and delivers natural gas within Alberta and British Columbia. NGTL connects with the Canadian Mainline and Foothills system, as well as third party pipelines.
- Canadian Mainline, which is 14,114 km (8,770 miles), transports natural gas from the Alberta/Saskatchewan border and the Ontario U.S. border to serve Eastern Canada and interconnects to the U.S.
- Foothills System, which is 1,241 km (771 miles), transports natural gas from central Alberta to the British Columbia/U.S. border for export to the U.S. Midwest, Pacific Northwest, California, and Nevada.
- The Company has 50% ownership of the Trans Québec and Maritimes Pipeline (TQM) and maintains operational control of this pipeline. TQM connects with the Canadian Mainline near the Ontario/Québec border, and transports natural gas to the Montréal and Québec City corridor, as well as connects with the Portland pipeline system that serves the northeast U.S.

2.2 Emergency Systems and Equipment

Company facilities and vehicles are equipped with emergency systems and equipment to protect employees, the public, the environment and the pipeline assets. Specific requirements for emergency systems and equipment are defined in the following policies and procedures:

- Vehicle Inspection (1019902344): specifies the requirements for First Aid Kit, Survival Kit, First Responder Kit, Safety Flares/Reflective Markers, and Fire Extinguisher in Company vehicles among other non-emergency equipment requirements.
- <u>Incident Command Post Kit Requirements Checklist (003674777)</u>: specifies the requirements for equipment maintained in each Incident Command Post (ICP) Kit.
- <u>Emergency Operations Center Checklist (004266666)</u>: specifies the requirements for equipment maintained at the Regional Emergency Operations Center (REOC).

2.3 Site Security

Company facilities are protected from security breaches. Specific requirements for security protections are defined in the Physical Security and Security Systems Standard (78280363).

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3 HAZARD IDENTIFICATION AND RISK ASSESSMENT

Each CGO Region is responsible to identify hazards (both from internal and external sources) which may result in an emergency affecting the Company's operations. The identified hazards will be reviewed through a risk assessment to determine the potential likelihood, consequence, and potential impact of the hazard. Risk assessments shall be used to develop emergency response plans, to mitigate impacts of the hazard, or amended to reflect the hazard.

3.1 Risk Assessment Information

Risk Management is a key element in ensuring the ongoing safety, integrity, and reliability of Company assets. Understanding risks through the execution of established risk management processes and incorporating these risks into emergency response plans will support ongoing safe, reliable, and efficient operations in emergencies.

The Company's Risk Management Standard (008749510) provides the foundations (policy, objectives, mandate, and commitment) and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management. The Emergency Management Program abides by the Risk Management Standard to ensure risks are identified and addressed in emergency response plans.

On-site Hazard Evaluation

The Company uses Emergency Planning Zones (EPZ) to identify areas most likely impacted by a pipeline incident. The table below should be used to assess the pipeline right-of-way for potential impact to human life. Where potential for highest impact exist, the community and population should be documented on the applicable Response Zones Annex as potential emergency scenarios.

NPS Diameter (OD)	Pressure (kPa)	EPZ distance from the centerline of the pipeline (m)
NPS 16 and under	all	200*
NDC 40	8000-10000	250
NPS 18	5000-8000	200*
	9000-10000	300
	8000-9000	250
NPS 20	7000-8000	250
	6000-7000	250
	3000-6000	200*
NPS 22	8000-9000	250

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NPS Diameter (OD)	Pressure (kPa)	EPZ distance from the centerline of the pipeline (m)		
	6000-7000	250		
	9000-10000	400		
	8000-9000	350		
NPS 24	7000-8000	300		
	6000-7000	300		
NPS 26	6000-7000	300		
	9000-10000	500		
	8000-9000	450		
NPS 30	7000-8000	450		
	6000-7000	400		
	5000-6000	400		
NPS 34	6000-7000	500		
	5000-6000	450		
	8000-9000	600		
	7000-8000	550		
NPS 36	6000-7000	550		
	5000-6000	500		
	8000-9000	750		
	6000-7000	650		
NPS 42	5000-6000	600		
	4000-5000	500		

^{*200} meters is the class buffer distance, which means that it is the minimum distance for the EPZ.

Worst case scenarios and overall vulnerability analyses should be conducted using the data in the table above. Each Region has the autonomy to determine their high impact and sensitive areas, and the Regions are responsible to develop site specific response plans to address each of these locations.

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3.2 Hazard Identification Matrix

In the table below, asset-based and natural hazards identified in the Emergency Management Corporate Program Manual (Section 2) are evaluated for likelihood to produce significant consequence or impact to CGO assets. Where the potential exists for a hazard to significantly impact CGO, there shall be a procedure to respond to each hazard in Section 5 of this Plan.

Hazard	Potential for Significant Impact CGO Assets	Procedure Included in Section 5			
Asset-Based Hazards					
Liquids Pipeline Emergencies					
Gas Pipeline Emergencies	✓	✓			
Power and Gas Storage Facility Emergencies					
Natural Hazards					
Floods	✓	✓			
Earthquakes					
Landslides/Rockslides	✓	✓			
Hurricanes					
Forest Fires	✓	✓			
Severe Thunderstorms	✓	✓			
Tornadoes	✓	✓			
Winter Storms/Ice Storms/Blizzards	✓	✓			
Prolonged Extreme Heat					
Severe Drought					
Technological or Man-Made Hazards					
Security Incidents	✓	✓			
Medical Emergencies	✓	✓			

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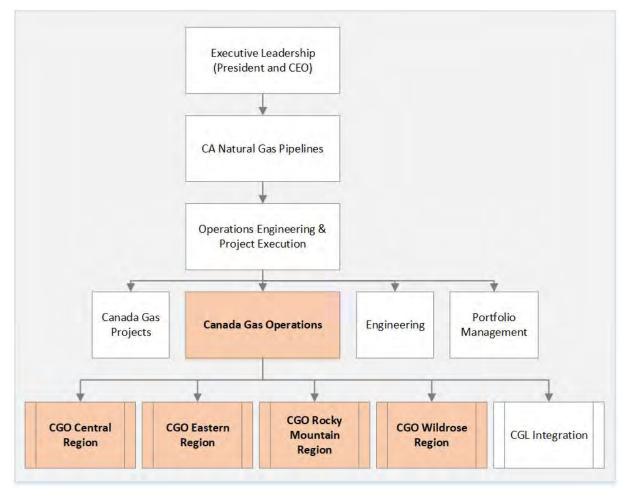
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4 ORGANIZATIONAL CONTROL OF EMERGENCY

When an emergency occurs, the chain of command and communication lines deviate from that during routine work. This section describes how the Company's emergency response personnel transition from the standard organization to implementation of the Incident Command System (ICS), which the Company has adopted as its system of organizational control during emergencies.

4.1 Standard Organization

The Company's CGO organization reports through the Executive Vice President of Canadian Natural Gas Pipelines. At the executive vice president level, the scope of assets is quite broad; under the executive level, the scope begins to narrow and includes Natural Gas Pipeline Operations. As is typical within the Company, under the Vice President of Operations, Directors are appointed to lead each Region of Operations. This standard organizational structure applies a single chain of command, unity of leadership (each employee has only one leader), and managed span of control (leaders have a limited number of direct reports), as depicted in the diagram below.



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4.2 Emergency Organization

In an emergency, the structure of leadership and decision making is altered from the standard organizational structure. This section describes the elements of the Company emergency response organization.

4.2.1 On-Scene Management: ICS

To effectively manage emergencies, the Company uses the Incident Command System (ICS). ICS is a standardized on-scene emergency management tool that has considerable flexibility, has been found to be cost-effective and efficient, and can be applied to both emergency and non-emergency events (if desired).

ICS is based on the knowledge that every incident or event has certain major management activities that must be performed. Even if the event is very small and only one or two people are involved, these activities will always apply to some degree. The five major management activities in ICS include:

- Command
- Operations
- Planning
- Logistics
- Finance/Administration

ICS principles implement the use of a single chain of command and unified leadership with a standardized span of control. When an Incident Management Team (IMT) is stood up, roles and reporting relationships change from the standard organization to align with the principles of ICS.

4.2.2 IMT: Incident Management Team

An Incident Management Team (IMT) is a group of people comprised of local or regional staff. who respond to emergencies to set objectives, manage resources allocation, and otherwise support personnel executing the specific tactics to stabilize and resolve the emergency. Incident Management Teams focus on the following response strategies:

- 1. Ensure the safety of all responders and the public.
- 2. Continuously reassess the situation and status of the incident.
- 3. Schedule incident briefings for supporting EOCs.
- 4. Define the issues and prioritize the problems.
- 5. Clarify response and secondary goals.
- 6. Establish objectives, strategies and tactics.
- 7. Identify and request resources required.
- 8. Develop an Incident Action Plan.

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Role kits, including checklists and other reference materials for the roles most commonly staffed in ICS, have been developed and can be accessed through the Company Emergency Management 1TC website.

Where these resources are not sufficient and/or additional support is needed, the Incident Management Assistance Team (IMAT) can be deployed.

4.2.3 IMAT: Incident Management Assistance Team

The Incident Management Assistance Teams (IMATs) are assistance teams because the Business Unit or Major Project retains the ultimate accountability and responsibility for an emergency. IMAT assists the Business Unit (BU) by providing highly trained personnel from throughout the company to manage or supplement the BU's regional IMT during an emergency.

At the discretion of the BU, the option to activate IMAT is feasible at any phase or operational period of an emergency. The effected BU can choose to activate an entire IMAT or request specific positions as needed. The BU maintains the determination to have IMAT members take lead roles in the ICS structure or supplement and support resources from the BU (Regional IMT). Positions IMAT does not cover will be filled by the Regional IMT.

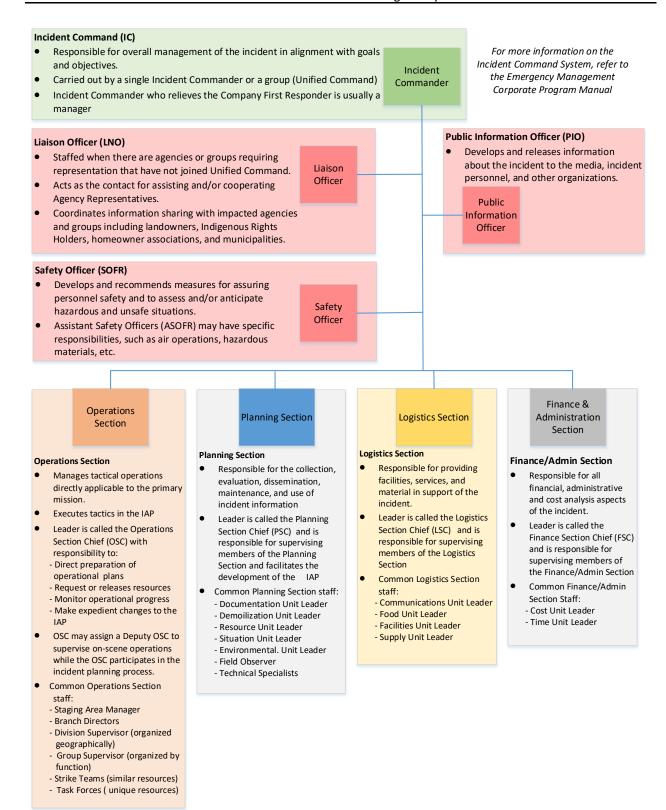
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In jurisdictions where variants or alternates to ICS are used, the Company will be aware of the differences and work the ICS process in unison with the alternate management system. Key Differences Between ICS and the Incident Management System (IMS) (1009943581) are demonstrated in a standalone document.

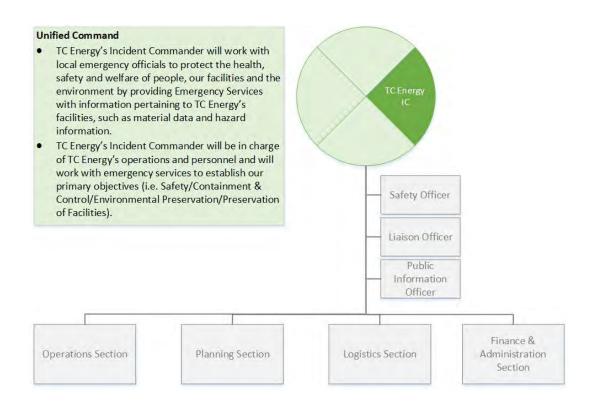
4.2.4 Unified Command

During an emergency, the command of an incident may transition from the Company to a local emergency response agency of jurisdiction (e.g. Fire or Police Chief; Civil Protection, etc.), or a provincial or Federal regulator.

The decision to assume command is discretionary on the part of local and regulatory authorities. Their response may range from:

- The assumption or transference of command and reliance on the Company as technical specialists;
- The imposition or recommendation of unified command; or
- Allowing the Company to retain command and being available as a resource to the Company.

The Company's preference is that our Incident Commander works in a consultative manner under Unified Command with other Incident Commander(s) from regulatory or local jurisdictions.



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4.2.5 REOC Teams

When activated, the REOC provides logistical support to the Incident Management Team, ensuring the Incident Management Team has all the resources they need to effectively contain and control the emergency event.

REOC Teams may assist with internal and external notifications, advice on containment and control of the emergency, and serve as a communication point for all Company resources. The REOC's role is to directly support all activities at the scene through communications, resource deployment and technical expertise.

REOC Manager The REOC manager is responsible for For more information on the Regional Emergency activating and staffing the REOC to provide Operations Center, refer to the Emergency support to Company First Responders and the Management Corporate Program Manual Incident Management Team. **REOC Manager** The REOC Manager role must always be filled when the REOC is active; the REOC Manager shall be the first position staffed and the last position demobilized from the REOC. Planning Logistics Operations Information Documentation Support Support Support Coordinator Coordinator Coordinator Coordinator Coordinator Information Coordinator **Planning Support Logistics Support Documentation Operations Support** Coordinator Coordinator Coordinator Supports the Coordinator Supports the Supports the Supports the Company First Provides technical Company First Responder/Incident **Company First** Company First support on operation Management Team Responder/ Responder/Incident Responder/Incident of the effected asset by liaising with Incident Management Team Management Team and Subject Mater Management industry partners, by ordering (and by creating records of Expertise on serving as an Team by looking tracking orders of) incident information. implementation of information gathering forward to resources **Provides** the Incident focal point for anticipate Incident (equipment, administrative Command System Corporate potential and personnel, and (ICS) within the support to the REOC. Communications, and requirements. consumables) as Operations Section on providing a linkage requested by between Corporate personnel on site. Communications and Responsible for the site. ensuring the REOC has the people, equipment, and other resources required for

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maintaining the REOC; this includes ensuring the REOC is secure.

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REOCs may be established in a physical or virtual (i.e. MS Teams) environment; if a physical REOC is required, the locations below are the primary site for each REOC.

Regional Emergency Operations Centers							
Wildrose Region Rocky Mountain Region Central Region Eastern Regio							
Edmonton Service Centre	Airdrie Service Center	Winnipeg Regional Office	Bolton Field Office				

The physical addresses of TC Energy facilities have been redacted from this section.

The specific actions and responsibilities of each REOC role have been established in REOC role kits. These materials can be accessed through the Company Emergency Management 1TC website. Like the Incident Command System (ICS), not all roles are required to be staffed in every emergency; however, when roles are not staffed, the responsibilities of unstaffed roles must be completed by other personnel.

4.2.6 Corporate Emergency Operations Center (CEOC)

The CEOC in Calgary support Canadian Gas Operations Emergencies, unless it is inaccessible or unusable.

Corporate Emergency Operations Center for Canad	ian Gas Operations	1	
TC Energy Tower		The physical addresses of TC Energy facilities	
Alternate Corporate Emergency Operations Center for Canadian Gas Operations			
Airdrie Service Center		have been redacted from this section.	

4.2.7 Executive Influence

Senior management shall be engaged during all significant incidents and emergencies that occur in the Company. This may occur concurrently with IMT and EOC activation but may also occur for significant incidents that do not meet the definition of emergency. In all emergencies the (on-site) Incident Commander has the authority to make all decisions related to the event.

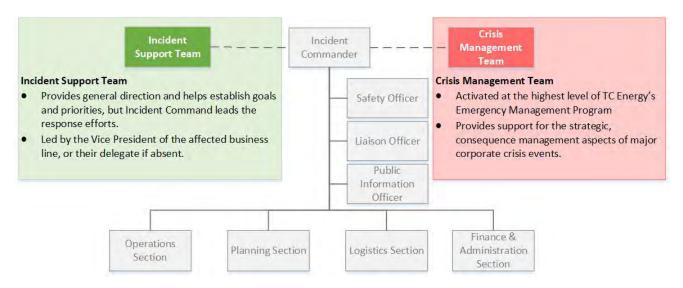
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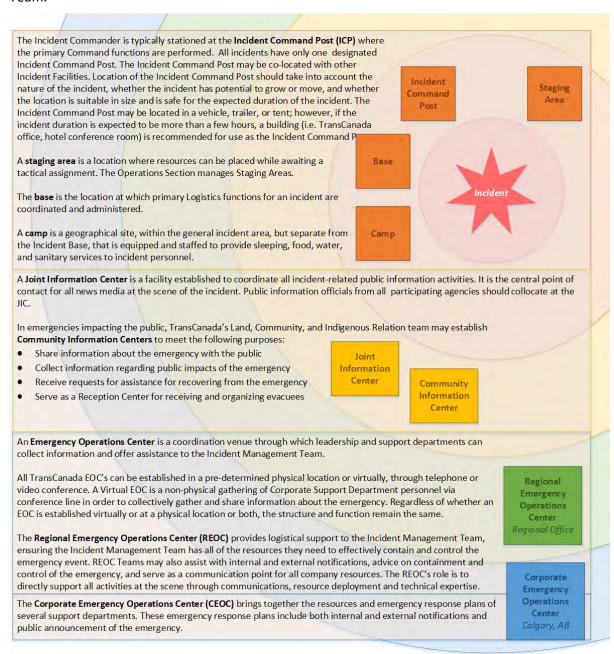


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4.3 Incident Facilities

Numerous physical locations can be used to support incident management; some of these facilities are used directly by the IMT to coordinate activities, provide support to the Operations Section, and assist with the organization and tracking of resources. Other facilities may also be established, commonly at a greater distance from the incident site, and these facilities can be used to the support the Incident Management Team



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5 **PLAN IMPLEMENTATION**

The Company is committed to conducting business in a safe and responsible manner. When an emergency does occur, the Company will take prompt action to protect public safety, limit the impact as result of the events pertaining to the emergency, make repairs, restore service, assist affected parties as appropriate, and communicate with those involved.

This Section describes the specific procedures used to safely and responsibly respond to an emergency.

5.1 **Response Process**

This Section of the ERP applies to all emergency events – all hazards, and all Canadian Gas Operations assets. When preparing for emergency response, the following emergency situations include a hazard-specific response actions defined in this section:

- Gas detected inside or near any building, especially buildings used or intended for human occupancy.
- A fire located near or directly involving a Company pipeline facility.
- An explosion occurring near or directly involving a Company pipeline facility.
- Natural disasters or other outside forces such as excavation which created a potential or actual emergency.
- Security Incidents, including bomb threats and suspicious packages.

IN ALL CASES, EMPLOYEES SHOULD FIRST TAKE ACTION TO PROTECT HUMAN LIFE, THEN THE ENVIRONMENT AND PROPERTY

This section provides the procedures to be implemented upon identification of an emergency.

5.1.1 Company First Responder

The Company representative first to arrive at the incident site is the Company First Responder. Two key responsibilities of the Company First Responder are as follows:

- 1. Take prompt action to protect human life, then the environment and property.
- 2. Ensure communication is established with local emergency services. Local emergency response officials shall be contacted anytime an incident poses a threat to public safety.

Response to any type of emergency must be timely and adequate. To best coordinate Company First Responder actions with response actions taken across the Company, the Company First Responder shall take actions in accordance with the Gas First Responder Checklist, or as summarized in the table below.

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Company First Responder

Refer to Gas First Responder Checklist for more detailed guidance

IMMEDIATE PRIORITIES

VERIFY EMERGENCY EXISTS. Safety first - do not put yourself at risk.

NOTIFY GAS CONTROL & ON-CALL MANAGER to provide them with details of the emergency.

• First Responder (you), Gas Control & REOC should now communicate using the REOC conference line.

Maintain open phone line or establish scheduled call times – whatever works best for you.

9-1-1: NOTIFY EMERGENCY SERVICES (Fire/Police/EMS):

• <u>Immediately</u> for injuries, any public evacuations, or required assistance (e.g. road closures). <u>As soon as practicable "for information only"</u> if incident is contained within TCE-fenced property, with minor offsite effects (i.e. smell/sound/sight) and no assistance required (courtesy notification).

EVACUATE IMMEDIATE AREA around leak if necessary (Minimum 200m/650 ft. around source)

- Maintain a safe distance from the scene (uphill and upwind, if possible).
- Assess the situation for immediate life safety/health hazards.
- If feasible attempt to notify people at risk without entering the hazard area.

If not and safe to do so, wear appropriate PPE and conduct evacuation notifications/rescue.

ESTABLISH PUBLIC EVACUATION ZONE (Default minimum is 800m/ ½ mile)

- HOT ZONE: No responders within 200m/650 feet of leak source without appropriate PPE.
- WARM ZONE: No public within 800m/½ mile of pipeline break/large leak until specific emergency planning zone (EPZ) size verified.
 - Determine specific EPZ for pipeline using <u>EPZ Handout</u> in first responder kit (Min. 200m; Max. 800m)

COMMUNICATE EPZ: Notify 9-1-1 or advise on-scene emergency services/emergency management authorities of specific evacuation area (Note: they may choose to go larger - e.g. 1600m/1 mile.)

ISOLATE THE SOURCE OF THE EMERGENCY in conjunction with gas control, REOC and technicians.

SECONDARY PRIORITIES

RESPONSIBILITIES & ACTIONS

LOG ACTIONS taken and times on this form and begin the INCIDENT BRIEF (ICS Form 201).

ESTABLISH UPDATE CYCLE: First, leave time to think (develop strategies/tactics) and get response work done. Balance your time between emergency services, field technicians and EOC conference line updates.

UPDATE THE EOC and delegate personnel/tool needs; and actions or notifications you are unable to make.

Ensure **STAKEHOLDER COMMUNICATION** occurs with nearby affected parties (homes, communities, motorists) via emergency services, local government, and/or REOC.

CONDUCT SECONDARY HAZARD ASSESSMENT. Consider:

Safe command location?	Nearest downwind residences & communities?		
Risks to traffic and bystanders?	Weather conditions (wind speed/direction /changes)?		
High consequence areas nearby, or	Possible ignition sources (if unignited gas)? Overhead and		

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environmental sensitivities?

underground utilities in area?

• Use Initial Health & Safety Plan (Page 5 & 6 of Incident Brief - ICS Form 201) or JSA (time-permitting).

Share results of key hazards with unified commanders (emergency services) and EOC.

OTHER CONSIDERATIONS

RESPONSIBILITIES & ACTIONS

CA/US NEWS MEDIA are to be given a Media Relations Card or be asked to contact **1-800-608-7859** or communications@tcenergy.com. Tell them this will connect them to TC Energy's corporate communications personnel.

SERIOUS INJURIES / FATALITIES:

- Ask emergency medical services where the injured/casualty will be taken.
- Arrange for emergency transportation of serious injury if ambulance service is not available.
- If possible, use landline or satellite phone to confidentially notify Manager-on-call or EOC manager.
- If there are serious fatalities of TC Energy personnel, refer to the <u>Critical Injury and Fatality</u> Response Procedure.

UNIFIED COMMAND (UC) is TC Energy's preferred method of inter-agency response coordination.

- Identify yourself to emergency services as the TC Energy Incident Commander.
- Ask to work cooperatively with those on-scene under a UC structure/as a unified commander.

TRANSFER OF COMMAND:

• The company first responder is TC Energy's (initial) incident commander until relieved. When ready to transfer TC Energy commander role (to a qualified TC Energy representative) use Incident Brief (ICS Form 201) as your guide. Then assume documenter or another role as assigned.

5.1.2 Incident Management Teams

As mentioned above, an IMT is a group of people who respond to emergencies to set objectives, manage resources and logistics, and otherwise support personnel executing the specific tactics to stabilize and resolve the emergency.

Where needed, additional resources can be deployed to support the Company First Responders. BU sourced Incident Management Team (IMT) personnel may be mobilized to support the incident. Additionally, resources from the Corporate Incident Management Assistance Team (IMAT) may be brought in to support the BU at request to the CEOC or Emergency Management Department Manager.

IMT roles should reference the <u>ICS Role Kit Checklists</u> which are available through the Emergency Management Website.

5.1.3 On-Call Manager

The On-Call Manager is responsible to ensure the Response Process described in this Plan is followed. Specifically, they shall take the actions summarized in the table below.

On-Call Manager

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- Provide support to the Company First Responder and IMT.
- Use Everbridge to activate the REOC, when warranted.
- Ensure the conference bridge is opened, maintained, and monitored to allow conferencing with the site and CEOC.
- Ensure local Emergency Response Agencies, Indigenous Communities, Rightsholders, and Public Officials are contacted.

5.1.4 REOC

The REOC provides support to the Company First Responder and IMT. Staff in the REOC are guided by REOC Role Kits maintained on the Emergency Management website and in the REOC itself. However, during response to an emergency, the REOC will, at minimum, take the actions summarized in the table below.

REOC

Refer to REOC Role Kits for more detailed guidance.

- Provide support to the Company First Responder and IMT.
- Ensure that the Regional Emergency Conference bridge has been established to allow conferencing of the site and Corporate EOC.
- Ensure local Emergency Response Agencies, Indigenous Communities, Rightsholders, and Public Officials are contacted. Make request for Incident Management Assistance Team (IMAT) deployment if required.

5.2 **Notifications**

All employees are empowered to notify emergency services directly for life threatening emergencies.

Internal Company notifications should be made in accordance with the First Responder, ICS, and REOC Role Kit Checklists, which include notification procedures for various Stakeholder and Rightsholders, including Indigenous groups, local health authorities, and other potentially effected government entities.

Depending on the location and regulatory jurisdiction of the emergency, various internal groups are tasked with completing Regulatory Notifications as described in the table below.

TC Stakeholders Responsible for Notification of Regulatory Bodies in an Emergency						
Regulatory Body	Responsible to complete the Notification	Contact Information				
TSB	CRC	819-997-7887				
CER	CRC	403-299-2773				

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AER	CRC	800-222-6514	
BC-OGC	CRC	1-250-794-5200	
Provincial Environment Authority	CG Environmental	Province Specific	
Canada Labour – ESDC	CRC	1-800-641-4049	
Provincial Health and Safety Authority (i.e., OHS)	CGOEP Safety	Alberta, 403 220-5333 Saskatchewan, 800-567-7233 British Columbia, 250-952-0911 Manitoba, 855-957-7233 Ontario, 877-202-0008 Quebec, 866-694-5454	
ABSA	CGO Pipe Integrity	780-437-9100	
NAVCANADA (for NOTAMs)	CGO Pipe Integrity; this notification may be delegated to Corporate Aviation	See <u>Aviation Department</u> <u>Response Plan</u> (65685295)	

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5.3 Matrix for Classifying Emergencies

Emergency Classification Matrix					
Consequence of Emergency Ra	nk			Likelihood of Escalation Rank	
Consequence Example	Rank		Rank	Likelihood Description	
No worker injuries.No/low media interest.Impacting only Company property.	1		1	 Emergency is contained or controlled and is unlikely to escalate. There is no chance of additional hazards. 	
 First aid treatment required for employee. Local/regional media interest. Incident has potential to impact off Company property/ROW. 	2		2	 Control of the emergency may have deteriorated, but imminent control of the hazard is probable. It is unlikely that the emergency will further escalate. 	
 Employee requires hospitalization. Regional/national media interest. Has impacted off Company property - public health/safety could be jeopardized. 	3		3	 Imminent and/or intermittent control of the emergency is possible. The Company has the capability of using internal and/or external resources to manage and bring the hazard under control in the near term. 	
 Fatality. National/international media interest. Has impacted off Company property - public health/safety could be jeopardized and environmentally sensitive areas are impacted. 	4		4	Emergency is uncontrolled. There is little chance that the Company can bring the hazard under control in the near term.	
CHOOSE THIS COLUMN'S RANK HERE >>		+		<< CHOOSE THIS COLUMN'S RANK HERE	
TOTAL EMERGENCY SCORE	=_				

EMERGENCY	Alert	Level 1 Emergency	Level 2 Emergency	Level 3 Emergency
SCORE >	(Score = 2-3)	(Score = 4-5)	(Score = 6)	(Score = 7-8)
Response Team Posture	Managed by Field Operations.	Local IMT deployed. IST notified.	Corporate IMT deployed.	Corporate IMT deployed.
Posture	Operations.	isi notinea.	IST active.	IST & CMT active.
			CMT notified.	
EOC Posture	None.	REOC active. CEOC Manager notified.	REOC & CEOC active.	REOC & CEOC active.
Resource	Immediate and	Begin to establish	Limited	Significant
Requirements	locally available.	resources that may	supplemental	incremental
		be required.	resources required.	resources required.

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5.4 Gas detected inside or near a building

Gas Detected Inside or Near a Building

- Avoid or eliminate possible ignition sources, such as cell phones and open flames/sparks.
 (Additional ignition sources may include laptops/tablets, cigarettes, electric switches, light switches, doorbells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, and static electricity.)
- Do not operate any light switches, doorbells, garage door openers or thermostats as you leave.
- Do not hang up the phone after finishing conversation if the call is being made from a building containing gas, since it could cause a spark and ignition.
- Immediately evacuate people in the general vicinity to a safe area, approximately 800 m (½ mile) away.
- Ask people not to return to the building until the area is determined to be safe.
- The appropriate on-scene emergency response official or utility company may provide additional guidance for ventilation.
- The primary purpose and presence of a fire extinguisher is as a life safety device to facilitate safe building egress. If a gas leak evolves to an ignited fire, a single safe attempt may be made to extinguish an incipient fire (< 1m x 1m x 2m high) by Company personnel (or contractors working inside the building) with valid hands-on fire extinguisher training certification.

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5.5 Line Rupture, Fire or Explosion

Pipeline Rupture, Fire, or Explosion

- Immediately evacuate people in the general vicinity to a safe area, approximately 800 m (½ mile) away.
- Direct vehicular traffic away from area.
- Avoid or eliminate possible ignition sources, such as cell phones and open flames/sparks.
 (Additional ignition sources may include laptops/tablets, cigarettes, electric switches, light switches, door bells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, and static electricity.)
- If a Company natural gas transportation facility is involved, no attempts shall be made to extinguish the fires beyond the incipient stage, except via isolation & shut-down or controlled burnout.
- Only qualified Company personnel should operate pipeline valves or equipment.
- Emergency Services may attempt to extinguish fires on nearby buildings, property or lands to prevent secondary damage.
- Determine if any additional personnel, tools, and equipment are necessary to make repairs.
 Secure these additional needs from the most convenient sources.

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5.6 **Sour Gas Detected at or Near Facility**

Sour Gas Detected at or Near Facility

- Immediately evacuate people in the general vicinity to a safe area, approximately 800 m (½ mile) away.
- Direct vehicular traffic away from area.
- Only qualified Company personnel should operate pipeline valves or equipment.
- Engage Emergency Services
- Avoid or eliminate possible ignition sources, such as cell phones and open flames/sparks.
 (Additional ignition sources may include laptops/tablets, cigarettes, electric switches, light switches, doorbells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, and static electricity.)
- Determine if any additional personnel, tools, and equipment are necessary to make repairs. Secure these additional needs from the most convenient sources.

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5.7 **Response to Natural Hazards**

The following section summarizes operational measures that may be taken, provided adequate time and resources are available as a natural hazard becomes a threat. When response to any natural disaster is necessary, the Gas Control Center shall be notified and kept informed of the event.

5.7.1 Flood

Flood

Preventative Measures

- Local operations may need to monitor local weather conditions to determine flood preparation requirements.
- Preventative measures may include, but are not limited to:
 - Raise vents on critical equipment, such as regulators, to an elevation higher than that expected of the floodwater.
 - o Extinguish line heaters if operating conditions permit.
 - o Time permitting; evaluate liquid removal from atmospheric storage tanks.
 - o Evacuate or secure hazardous materials.
 - Determine if normally aboveground facilities (valves, M&R and relief valve setting, etc.) could become submerged and be struck by watercraft operating in flooded areas. Mark such facilities with buoys as appropriate.
 - o Disable line breaks or other automatic safety devices if necessary.
 - o Take appropriate measures to protect critical equipment with fences or other temporary means.
 - o Take action such as removing valve handles or locking valves to ensure continued service and to prevent possible damage to Company facilities.
 - Ensure regulatory required records are secure. These might include local operation equipment, manuals, DOT or OSHA files
- Follow site specific Evacuation and Business Contingency Plans, when applicable.
- Contact the Gas Control Center to inform them of the local actions taken.

During Flooding

- Perform frequent patrols, as appropriate; to evaluate right-of-way conditions at water crossings during flooding and after flooding subsides.
- Have personnel available for emergency response action such as shutdown, isolation, and contamination.
- If gas is leaking at a facility due to physical damage or floodwater having extinguished a pilot light, gas should be shut off to that location (unless the location can be made safe without shutting off the gas supply, and there is a reason not to do so).
- Consider the effect on other consumers on the same pipeline.
- Coordinate with other pipeline companies in the flood area and provide personnel, as appropriate, to emergency response centers to act as liaison for pipeline issues. Provide maps and information on location of pipeline facilities and conditions to emergency responders as required.
- At facilities, use precaution in flooded areas due to the risk of electrocution, swift-moving water and debris, and submerged surface debris and damage. For additional information refer to your facilities Evacuation Plan.

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After Flooding Subsides

- Obtain any necessary entry permits from local authorities.
- Inspect exposed facilities and evaluate for possible damage. Determine if flooding has
 exposed and/or undermined pipelines as a result of forming new channels or erosion of
 stream or riverbeds.
- Assure that line markers and signage are still in place. Remind emergency responders, highway departments, contractors and others involved in flood cleanup and clearing activities of the presence and location of pipelines in the area and the potential hazards due to reduced cover over the pipelines.
- Evaluate damage to electric motor and the electrical and control system before attempting to restart the facility.
- If necessary, purge lines prior to returning equipment to service.
- Inspect right-of-way of affected pipelines to determine if depth of cover has been reduced.
 Notify affected landowners of any reduced cover. Agricultural agencies may be helpful in reminding farmers of potential hazards resulting from reduced cover over pipelines.
- Return line breaks or other automatic safety devices to service.
- Notify Gas Control Center of return to service.
- Document any patrols, inspections, repairs or notifications.

5.7.2 Landslide/Rockslide

Landslide

Preventative Measures

- Preventative measures may include, but are not limited to:
 - Protect facilities to the extent possible by erecting barriers.
 - Should the construction of protective barriers not be feasible or effective and destructive damage to the facility is imminent, then other measures should be taken to isolate gas from the facility. Establish alternate means to supply customers (either temporarily or permanently) as required.

After a Landslide

- When a landslide occurs over a buried pipeline, the Area manager should contact the local Pipeline Services personnel to assist with determining subsequent actions that may be required. Temporary or permanent actions may include:
 - o Removal of excess material,
 - o Relieving stress on the pipeline where soil support has been removed,
 - o Other actions as determined by the Pipeline Services personnel.
- If a pipeline facility is covered by a landslide, it may be necessary to shut off the supply to that facility before attempting to uncover. Company personnel should communicate with Gas Control to coordinate response to shutting off pipeline supplies unless the situation is an immediate threat to public safety, Company personnel should communicate with Gas Control as the situation warrants.
- Be sure to document all patrols, inspection or repairs in the Company's work management system. Return the facility to service.

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5.7.3 Forest Fires

Forest Fire

Preventative Measures

- Preventative measures may include, but are not limited to:
 - o Isolate the pipeline facility or minimize the risk from fire by trenching, watering, removing combustibles in the area and/or other appropriate measures,
 - o Shut off gas to facilities as deemed appropriate. Company personnel should communicate with Gas Control the coordinate response to shutting off pipeline supplies unless the situation is an immediate threat to public safety. Company personnel should communicate with Gas Control as the situation warrants.

Preparedness in Fire Prone Areas

- Communicate with fire authorities to share key contact information and communication expectations.
- Ensure fire authorities are familiar with the location of pipelines within their jurisdiction and know the risks of digging and driving heavy equipment across the ROW.
 - Share existing company excavation procedures, safety guidelines, crossing requirements, and depth of cover/weight restrictions.
 - o Request the fire lines are be constructed on the edges of the ROW (not over the pipeline).
 - The Company prefers Company personnel to be on site and monitor activity on the ROW.
- Fire agencies may use ROW as a firebreak/fire line; ensure fire agencies know they are required to make an emergency one-call before disturbing ground on the ROW. Stake the pipeline to identify the location of the pipe(s) in the right-of-way.
- Pre-draft the appropriate information to complete a formal pipeline crossing agreement.
 Send required information to the Land Department.

Response Measures

- If a fire is within 10 km of a Company facility, Regional leadership shall:
 - o Consider evacuating personnel from the site. Determine a safe place to relocate.
 - Because forest fires create their own wind and are unpredictable, employees will be evacuated out of the fire area for their safety.
 - o Report the situation to the On-Call Manager and the Control Center.
- Regional leadership should consider if an EOC is required
- Regional leadership should consider if an Incident Command Post is needed and if so, where the Incident Command Post will be established (may be a mobile Command Post). Consider the following:
 - o Located within a secured area
 - o Access and egress routes from stations in question
 - Need to isolate facility (isolate remotely if possible)
 - Notifications both internally and externally.
 - Management of resources in or near fire area.
- Site personnel and/or the REOC shall maintain periodic contact with the local fire authority and the appropriate Federal, State or local agency (if possible) as applicable for status and direction of the fire.
- Monitor road closures that may hamper the movement of Company personnel into or out of

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the site.

- If a fire is within 10 km of a Company facility, or if there is a potential for operational changes or impact due to a fire, Canadian Regulatory Compliance shall:
 - Evaluate reporting requirements for affected jurisdiction and make any required regulatory notifications.

Considerations to Prepare a Facility Prior to Evacuating

- Regional leadership should decide whether site isolation is required.
- Gas Control should determine what the system requirements are without the threatened/damaged facilities in service.

General Considerations

- Maintaining gas flow through a pipeline will dissipate heat; Gas Control and Field Operations must collaboratively weigh the risks of isolating a station in proximately to a fire.
- Eliminate stagnant flow Review P&ID for above ground vs below ground components. Above ground components should continue flowing or be blown down. Check for dead heading on above ground equipment.
- Shutdown and blowdown station if possible. Open recycle valve to maintain gas flow through station.
 - Heat may affect the site electronics and SCADA equipment causing Gas Control to lose communication or control over the facility.
 - Decision should include consideration for any maintenance issues (valves out of service, maintenance activities) that could affect normal isolation procedures or hazards
 - o Review methane emissions (LDAR) data for existing issues. Severity of issues could inform strategy for blowdown vs continued operation.
 - o Consider minimum unit maintenance requirements (e.g. liquid top ups) for longer term evacuations.
- Minimize pressure in area to provide buffer in case a compressor unit goes down and OPP device is triggered.
- Draw down local line pack.
- Consider making temporary OPP design/system changes. Especially where slam shut valves used for OPP could block flow through the pipeline or fail closed valves are installed.
- Customers shutting in could result in stagnant flow, or unit shut down could result in unplanned flaring by a producer. Customers and producers will be made aware of this possibility, so they can determine their course of action if this were to occur.
- Remove flammable products from storage areas and/or provide information on remaining products to fire services.
- Empty meter station drain and dump tanks (including below ground), and drain mercaptan as low as possible.
- Cover building windows and close doors. Assess location of any fire-eyes.
- With brushing controlled, impact should be radiant heat only (no fire on facility footprint).
- Meter stations and valve sites are typically considered at higher risk the Compressor Stations of exposure to heat from a forest fire, as there is less of a buffer area.
 - o There should be no reason to drop fire suppressant on facility footprint.

Ensure appropriate ROW crossing oversight for bulldozers clearing brush and moving along ROW.

Pre-Evacuation Activities to Support Post-fire Integrity Assessment

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 Walk down site and take video and pictures, focusing on fence and painted surfaces near fence. Review the "Important Indicators" in Fire Investigation: Data Collection for Damage Assessments (CDN) (Item ID: 1014991472) for a list of key components to document

- Install temperature stickers at different distances from fence.
- Deploy and implement High Temperature Data Logger (HTDL)

Component Specific Considerations

- APU/PPU Remains on if station is continuing to operate
- Boilers and Pumps Glycol piping insulation is not flammable. Low flow from utility gas, low risk component.
- Coolers Will either have gas flowing through dissipating heat or will be shutdown. No impact.
- Fire Suppression Remains active. Assess location of any fire-eyes and block windows.
- Instrumented Air Filter will catch ash. Ignition unlikely due to position.
- Fuel Gas and Utility Lines Remains open if unit will continue operating. If decision is made to shutdown and blowdown compressor unit, consider blowing down fuel gas and utility lines. Consider by-passing the fuel meter depending on proximity to facility boundary.
- OPP Pressure Relief Tubing, power gas, wires and seals would all be impacted if exposed to heat. Consider operating without OPP if gas flow/ line pack are low. Applies to control valves & regulators as well.
- ESD Valves that Fail Open Consider additional fire protection measures to protect components
- Valves For valves that fail closed and could block flow, consider disabling HPSD to keep gas
 flowing below ground instead of venting. Isolate power gas feeding hydraulic actuators on
 isolation valves and leave them in the normal operational position as confirmed by
 Operations Planning. Depressurize the control circuit. Consider risks of disabling line break. If
 line break is disabled, inform on-call manager, EM team, Operations Planning and Gas Control
 in case there is an emergency event on the section of line without line break. Valves are fire
 designed under API up to 750C 1000C for up to 30min with minimum leakage.
- CP Systems Consider LOTO if equipment is outside of station. This will also eliminate arcs/sparks for any other preparatory actions.
- Electrical, Instrumentations & Controls De-energize if compressor will not be operating. If
 utility powering electric motor driven (EMD) unit is no longer supplying energy, de=energize
 high voltage line. Maintain communication with local utilities to provide insight into whether
 APU is running at facility.

Considerations if a Facility is Isolated and Vented

- All gas venting must be done safely and review the process with consideration for weather conditions at the time of the fire.
- If judgement indicates a need and ability to vent the station (considering wind direction and
 proximity of fire), the station may be vented and isolated by ESD; field operations personnel
 should discuss the decision with the REOC and/or Area Manager before venting a station in
 proximity to a fire.
- Authorities must be advised if gas will be vented to restrict all aerial traffic from flying over or near the compressor station. An ESD of the facility could happen at any time so it is imperative there be no aerial traffic above or within 750 meters of a compressor station.

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- The local authority having jurisdiction (example Forestry, Dept. of Natural Resources, Fire Boss etc.) must give permission for venting of gas in a forest fire area.
- o Local Emergency Services must be notified if venting of station occurs near a roadway.
- O When venting is complete, ensure you call the appropriate authorities you have completed your venting.

Considerations if an Evacuation of site is required

- Inform the Monitoring Center/Gas Control and the REOC of personnel evacuation routes and final destination. Notify the Monitoring Center/Gas Control and the REOC to confirm arrival at your destination.
- If working with local authorities on creating fire breaks:
 - o Notify Monitoring Center/Gas Control and Area Management.

After a Forest Fire

- If a facility is on fire, shut off gas to the area unless the area can be made safe without shutting off the gas, and there is a reason to do so.
- Above ground facilities exposed to open flames may be damaged. Contact the appropriate Engineering services personnel for assistance in assessing damage prior to returning the facility to service.
- Be sure to document all patrols, inspection or repairs in the Company's work management system. Return the facility to service.
- Remove any temporary crossings (that may have been installed in support of the emergency) once the emergency is over and it is safe to do so.
- Above ground facilities exposed to open flames may be damaged.
 - o Field Operations should develop an appropriate inspection/damage assessment strategy prior to returning the facility to service. Follow guidance in:
 - i. <u>TEP-IN-FIRE-G Fitness for Service Assessment After Wildfire (CAN)</u> (1018270019)
 - ii. <u>Fire Investigation: Data Collection for Damage Assessments (CDN)</u> (1014991472)
- Consider the following during inspection and assessment:
 - Thermal relaxation of bolts
 - o Pipe supports could bend or have piping stress
 - o Damage to barriers between supports and pipe
 - Check elastomers and functioning of regulator valves
 - o Actuator may incur major damage after fire without protection
 - o CP systems possible welding of metals and cabling shorts.
 - Visually inspect above ground electrical cabling.
 - o Above ground pipe could have quenching if hot and exposed to water.
 - Check flange gaskets
- If damage is found, Engineering will be contacted to investigate the integrity of the equipment/facility.
- A return to service plan should be developed with the Region, Pipe Integrity and Gas Control before operations are restored.
- Document all patrols, inspection or repairs in the Company's work management system.
- Make appropriate repairs.

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5.7.4 Tornados / Thunderstorms

Weather events may be the catalyst for many of the emergency situations stated herein before, such as fire or explosions due to a lightning strike, flooding due to severe thunderstorms, etc. Refer to the instructions previously provided for possible means to control the situation.

Tornado or Severe Thunderstorm

Preparedness Measures

1. For all manned facilities, Field Operations should identify the nearest designated storm shelter, either on site or in a nearby community.

Preventative Measures

- 1. Employees shall take the appropriate actions to protect themselves.
- 2. Be Aware of Changing Weather Conditions
 - Tornado watch Conditions are right for the formation of a tornado.
 - Tornado warning A tornado has been sighted, and there is an immediate threat; take cover.
- 3. Never place yourself in danger to preserve company equipment.
- 4. Have personnel with public broadcast radio receivers tune them to an appropriate station to monitor weather information.

If a "warning" affecting the team operating location is issued:

- 1. Ensure all personnel relocate to a safe location.
- 2. Notify the Monitoring Center/Gas Control and the Area/On-Call Manager if it becomes necessary to seek shelter.
 - Advise them the Team will be out of communication for a period of time but will reestablish communication once the hazard has gone.

In the event of an approaching tornado:

- 1. Never place yourself in danger to preserve company equipment.
- 2. Advise the Area/On-Call Manager that the Regional EOC may be required.
- 3. Advise the Monitoring Center/Gas Control of pending tornado.
- 3. All personnel at the facility (if they have time and safe to do so) will seek shelter in a designated storm shelter, either on-site or in a community storm shelter.
 - If there's not time to evacuate, Company employees should seek a small room in the central part of the building that is removed from operational equipment.

After the Storm Passes

- 1. After the danger has passed, the employees shall:
 - Assess the situation to determine if there have been any injuries and treat/evacuate any injured employees.
 - Notify Area/On-Call Manager, REOC and the Gas Control that the storm has passed, and all personnel are accounted for.
- 2. Obtain any necessary entry permits from local authorities.
- 3. A comprehensive inspection plan shall be developed and executed:
 - Survey damage to Company facilities.
 - Trip ESD or isolate portions of the facility that have been damaged.

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- Communicate damage that has occurred to the REOC, Area/On-Call Manager, and Gas Control
- All facilities, equipment and controls must be thoroughly inspected for damage from exposure to tornado and repairs conducted as necessary prior to putting any critical equipment back into service.
- 4. Field Operations will collaborate with Engineering to develop and execute a Repair Plan.
 - Develop and execute a return to service.

5.7.5 Ice Storms/Blizzards

Ice Storms/Blizzards

Preventative Measures

- 1. If severe winter weather is forecast, arrange for additional personnel to travel to critical sites prior to onset of winter weather to provide relief to those on shift. Keep the person they are relieving on site for relief later.
- 2. Employees that are working at critical company facilities should be prepared to stay on location by doing the following items:
 - a. Take a supply of emergency food and water to site (canned goods and dry goods)
 - b. Keep foldable cots and bagged sleeping bags on hand

During an Ice Storm or Blizzard

- 1. Company employees should remain where they are and wait until conditions are safe to travel.
- 2. Monitoring weather forecasts and road conditions before leaving your safe location.

After the Storm Passes

- 1. Obtain any necessary entry permits from local authorities.
- 2. Determine alternate routes to impacted Company locations.
- 3. Some Company facilities may require an inspection to verify that pressure control equipment has not been damaged as result of ice buildup or stresses to the equipment from the snow conditions. This inspection should be conducted when conditions are safe to do so.

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TC Energy security procedures have been redacted from this section.

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5.8 **Security Incidents**

For detailed guidance for response to a Security Incident, refer to the following procedures:

Security Threats Process (CAN-US-MEX)

In summary of the above procedures, the following pages provide guidelines for actions to be taken.

Security Threats		
Bomb and Sabotage Threat		
Bollip alla Sabotage Tilleat		

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5.9 **Response to Medical Emergencies**

A medical emergency is a condition that requires care beyond first aid (i.e., chest pain, unconsciousness, trouble breathing, severe bleeding, burns, seizures, etc.).

Employees who encounter a serious medical emergency should seek help immediately.

If there are serious fatalities of TC Energy personnel, refer to the <u>Critical Injury and Fatality Response</u> Procedure.

Medical Emergency

- Do not move the injured or ill person unless the person is in danger of further injury or illness.
- Call 9-1-1.
 - o Provide the dispatcher with your name, specific location, call-back number, the nature of the emergency.
- If trained and willing, render first aid and make the affected person as comfortable as possible until emergency medical help arrives.
- If an Automatic External Defibrillator (AED) is located in the building, use the AED in the event of sudden cardiac arrest.
- Contact the Area Manager.

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5.10 Response Time Standard

Timely response to emergencies is important in minimizing impacts to the public and environment. To this end, CGO has adopted the Response Time Standard for all Canadian Energy Regulator (CER) regulated natural gas pipelines.

The Response Time Standard provides planning goals during all confirmed pipeline emergencies on Canadian assets. The standard may be used as a guideline for assessing response times for other, non-NEB regulated assets.

Response Time Standard Table for Pipelines			
Phase	Response Time	Actions	Description
Phase 1	Initiated immediately upon recognition of a pipeline emergency	Immediate Response Actions	Initiation of immediate response actions/procedures. Control Center/On-site initiation of actions to control the source, dispatch emergency responder, remote isolation, or shutdown where SCADA Telemetry is available to do so.
Phase 2	2 Hours	Emergency Response Activities	Establishment of an incident management system is prioritized immediately upon recognition of an emergency. The establishment of the Incident Command System is initiated no more than two hours after recognition of a pipeline emergency. Initiation of ICS can be confirmed through identification of an Incident Commander, preparation of the ICS 201 Form or any other ICS driven activity.
Phase 3	3 Hours	Staff on-site	Company First Responder on scene within 3 hours.
Phase 4	6 Hours	Initial Emergency Response Equipment on-site	Initial response equipment is on-site no more than 6 hours from recognition of an emergency, with additional supporting requirements in the case of oil taking no more than 72 hours. This can be achieved with in-house, mutual aid, spill cooperatives or contracted response equipment. Emergency Response equipment for oil is based on a calculated formula that determines worst case discharge amounts, which, in turn, determine the planned amount of equipment for response.

In all cases, safety of employees and the public remains the priority in response to an emergency; safety will not be compromised to meet the Response Time Standard. External factors and conditions must also be taken into account when evaluating the rapidness or effectiveness of a given response, such as;

Remote locations and locations with road accessibility

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- Time of day
- Weather conditions
- Past weather conditions (road closures, site not accessible due to flooding, etc.)
- Communication infrastructure integrity (i.e. systems compromised due to infrastructure outages)
- Transportation issues (i.e. road closures, traffic accidents, rush hour)
- Site seizure
- Site security (sabotage, protest activity, etc.,)
- Other agency/government involvement

5.11 **Documentation of Initial Response**

Proper documentation during emergency response is vital. In early phases of an emergency, high stress levels and fatigue decrease responder's ability to accurately recall actions and information. As the incident grows, documentation becomes an important means of sharing information with internal and external stakeholders and rightsholders. Finally, when an emergency is closed, documentation becomes the permanent record of the incident and subsequent response.

Due to the importance of proper documentation and note taking during an emergency, the Company has prepared <u>Guidelines for Records Produced During and Emergency</u> (004825243) to assist all Company personnel with understanding the importance, concern, and legalities of proper record production.

5.12 ICS Transition and Stand-Down

Transitioning from an ICS managed site, including standing-down the ICS structure, requires the development and acceptance of a plan to manage remaining incident-related issues which are presently being managed under ICS. The Residual Issues Transition Plan (RITP) is the preferred document for guiding the management of remaining issues. The objective of the RITP is to identify the issues, determine a path for their management to conclusion, identify the responsible persons/parties, and establish accountability by the Regional Director to ensure completion.

- The Regional Director is both responsible and accountable for the management of all issues within the RITP unless responsibility is specifically identified and accepted elsewhere.
- The RITP may refer to or use existing organizational processes (e.g. CPMS) where these are applicable, understood and agreed by the Regional Director.
- Where feasible, tolerance and acceptance criteria/levels for issue & action items are identified to establish a measurable close-outpoint.
- Example categories of issues/action items within an RITP are: assumption of ICS roles/duties by persons/departments outside present ICS structure; incident demobilization; Project Turnover Memorandum (PTM); restoration of service/Pre-Startup Safety Review (PSSR); communication plan; site security and patrol plan; remediation and reclamation;

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environmental concerns; safety concerns/continuing safety plans; management of privileged and confidential information; media, community, land owner, rightsholders issues; management of claims and invoices; regulatory issues and interface point(s); and investigation conclusion/follow-up.

Those personnel recommending the stand-down of ICS (e.g. Command and General Staff) shall consult the Regional Director in the development of the RITP ensure clear and willing acceptance of the accountability.

Following the acceptance of the RITP, Command is responsible to enact a demobilization plan for personnel, individual resources, and incident facilities in accordance with the resource management process used during the response. Resources still being used are transitioned to the accountability of the Regional Director.

5.13 **Post Emergency Response Actions**

Even after the immediate threat to life is over, there is much work to be done before the Company can return to routine operations. These post emergency actions vary depending on the scope, magnitude, type and impact of the emergency. However, return to service and incident investigation are always two of the key elements of an emergency.

5.13.1 Return to Service

While outside pressures may rush the Company personnel to return an asset to service, this must not be done in haste. A comprehensive inspection and return to service plan should be developed before services are restored. All facilities, equipment and controls must be thoroughly inspected for damage, and repairs conducted as necessary prior to putting any critical equipment back into service.

If Company facilities or assets are damaged or destroyed, they may not necessarily be rebuilt. Operations personnel will evaluate needs and staffing levels through a damage assessment review.

Before repairs are made, all Company safety policies and procedures, as well as the appropriate Job Hazard assessments, should be reviewed as necessary.

5.13.2 Investigation

It is not necessary to investigate every emergency. The hazard, impact and severity of the emergency should be considered when determining whether an investigation is necessary. All incidents that have an actual severity of major or critical require investigation, in accordance with the Incident Management Program. Incidents with an actual severity less than Major are considered for investigation based potential consequence or initial risk calculations; safety recommends a best practice is to perform investigations on all incidents including near hits.

When an investigation occurs, it must be conducted in accordance with the <u>Incident Management Standard</u> (1020362467).

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6 **RESPONSE RESOURCES**

6.1 **Public Response Resources**

Public agencies, including federal, provincial, municipalities and local emergency response agencies, often maintain their own emergency response equipment. While the Company will not rely on these resources to respond to a company emergency, they may be used if the agency owning the resources wishes to engage in the response. In all cases, local emergency response agencies will maintain their accountabilities to their jurisdiction which will likely require them to employ local resources to provide public security, emergency medical services, and public health services. If public resources are not required to be involved, the Company and the agency may mutually agree that use of the equipment would improve the response; if this occurs, the public agency may willfully support the Company's response, but shall never be dictated to do so by the Company. If the Company requests use of Emergency Services Resources, the Company expects to assume associated costs based on established rates for use of the equipment requested.

Emergency Service Resources shall not be requested or expected to support long-term operations; if long term support is required, these resources shall be procured through contract resources.

6.2 Contracted Resource

The Company maintains contracts with response contractors that are capable of responding to all Company emergencies. Contracts have been established with equipment rental companies, spill removal organizations, and environmental contractors; these contracts should be referenced in the local or asset specific emergency response plans for the assets supported by contract resources.

When feasible, contract resources shall be vetted and approved through Supply Chain's contractor approval process prior to an emergency. However, in cases of emergencies, when approved contractors are not available in a timely manner, resources can still be accessed.

6.3 Company Owned Equipment

Company owns and operates response equipment; this equipment is primarily designed for response to an oil spill from a liquid pipeline; however, it may be used for any Company emergency.

Company owned response equipment is contained within warehouses or response trailers strategically staged to expedite response; this takes into account asset based risk and availability of contract, mutual aid, and cooperative resources.

Company Owned Response Resources can be requested for response to a Company emergency by the Incident Commander through the REOC if appropriate or to the CEOC directly if there is no REOC involved in the response. Company owned equipment may also be deployed to Mutual Aid Partners

and governmental agencies for non-Company emergencies; Regional Leadership accountable for the specific resource shall approve loaning equipment to third parties. Before loaning equipment, consideration is given to maintaining the Company's ability to respond to a potential internal emergency.

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6.4 Response Assistance Agreement

Response Assistance Agreements are reciprocal documents drawn up between the Company and other parties where the Company is either requesting assistance or providing assistance in a local area. The Response Assistance Agreements states the mutual aid partner's intention to provide a service, equipment or personnel on a "best efforts" basis.

Response Assistance Agreements are not required for emergency services that are provided as a public service (i.e. Fire, Police and Ambulance). This procedure outlines the process for determining when a Response Assistance Agreement is appropriate, and the steps to take in making such an agreement.

6.5 **Casual and Volunteer Laborers**

Volunteers will not be utilized by the Company for response operations. In the Canada, if volunteers are used during a Company emergency, they shall be coordinated through and directed by public agencies.

6.6 **Emergency Procurement**

In an emergency, the Company shall make all efforts to use Supply Chain approved resources; however, in emergencies, if contracted resources are not available, the Company may make other arrangements to use otherwise available resources to protect people and the environment. If resources not previously approved by Supply Chain must be used, Supply Chain shall be immediately notified and shall work cooperatively with the Incident Management Team to expedite approval and payment of required resources.

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7 RELEASE DETECTION

The emergency phase of a gas pipeline rupture or release tends to be shorter in duration than an emergency on a liquid pipeline, but the impacts to human life can be greater and more immediate. Response plans for gas pipelines must be developed to prepare the Company to take immediate action to protect people from the impact of an emergency.

The Company develops and maintains several emergency response plans which address gas pipeline emergencies in greater detail for each asset; these emergency response plans can be accessed Emergency Response Plans (ERPs) (sharepoint.com)

7.1 Release Detection

The Company's Canadian natural gas pipelines are remotely operated and monitored from a control center in Calgary, Alberta. Additionally, Operations personnel conduct maintenance and surveillance along the pipeline right-of-way to mitigate and detect abnormal conditions. Emergency response plans shall address the actions and responsibilities of both the control centers and personnel near the site to ensure a coordinated and efficient response.

7.2 Release Prevention

The Company maintains and executes a rigorous Maintenance Program to ensure the integrity of assets is sound. The Maintenance Program is the foundation of the Company's emergency mitigation and prevention efforts.

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8 MAINTAINING PREPAREDNESS

Execution of the response process outlined in this plan requires Canadian Gas Operations and their response partners to train responders to use the plan and to exercise the plan itself. This section describes the Company's efforts to ensure this Plan can be executed to protect life, preserve the environment, and communicate the status of an emergency to all stakeholders.

All Company
Employees with
the potential to respond
to an emergency are
expected to complete assigned
training, participate in exercises
within their purview, contribute ideas
for Program improvement, and identify
Program preparedness gaps.

Emergency Preparedness Coordinators

(EPCs) are generally Managers or Specialists of an Operations Region who is tasked with leading the Emergency Preparedness Teams (EPTs) in accomplishing their duties. The EPC represents the Region on Emergency Preparedness and Response issues.

EM Single Point of Contacts (SPOCs) liaise with their respective EPCs, provide support and guidance for Program implementation, and solicit feedback for Program improvements.

EPC Coordinator provides direction and tools for consistent, efficient, and effective Program implementation by SPOCs and EPCs.

Emergency Management Team

The Emergency Management Team is a corporate level department that supports corporate and operations functions in standardizing and implementing a uniform Emergency Management Program across all counties and all assets operated by TransCanada. At TransCanada, Emergency Management includes Business Continuity and Crisis Management in addition to traditional Emergency Preparedness and Emergency Response.

Emergency Management Program Steering Committee

The Steering Committee oversees the Program to ensure adequate senior management governance and review takes place with respect to the planning, objective setting, execution, performance review, and continuous improvement of the Program. The TransCanada Emergency Management Program Steering Committee is guided by the TransCanada Emergency Management Program Steering Committee Mandate (008639746).

Specific responsibilities of each element of the Company emergency preparedness system are listed in Section 6 of the Emergency Management Corporate Program Manual.

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8.1 **Debriefings**

Following all emergencies and exercises, participants shall conduct a debriefing, or after-action review. An after-action review is a structured process for analyzing what happened, why it happened, and how response can be improved by those responsible in a real emergency. The goal of the debriefing is to reviewing employee activities to determine whether the procedures were effectively followed in each emergency without placing blame on the individual employee; rather, this process allows the Company to determine the effectiveness of the Emergency Response Plan and the Training Program.

Formal after-action review meetings are run by a facilitator and can be chronological reviews or tightly focused on a few key issues selected by participants. The findings from the after action review are captured on the Debriefing Form: <u>Debriefing Template</u> (004460398)

Based on the debriefings, or after-action reviews, from exercises, stakeholders make recommendations for improvements to local and company emergency response procedures.

The EPC will be accountable to properly document all emergencies and exercises. Emergency Management Team will provide assistance in the development of this documentation.

8.2 Review and Revision of this Plan

The content of this Plan is reviewed, reassessed and updated by operating personnel at least once each calendar year. Revisions to the Manual are provided in a "Revision History" found immediately after the title page of this Plan.

The Plan is available to all operating personnel who would be responsible for handling an emergency through the Controlled Documents Library.

The Document Contact listed on the title page is the Company representative responsible for reviewing all updates to the Plan and sharing this information with applicable Company employees.

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APPENDIX A: Contact Information

Gas Control Center		
Agency	Telephone Number	Address
Canadian Mainline: West Console		
Canadian Mainline: East Console		
NGTL: Central Console		
NGTL: North Console		
NGTL: East Console		

TC Energy facility addresses and internal contact information have been redacted from this section.

Emergency Operations Center			
Regional EOC	Telephone Number	Conference ID	PIN
Wildrose Region			
Rocky Mountain Region			
Central Region			
Eastern Region			

TC Energy facility addresses and internal contact information have been redacted from this section.

TC Energy Emergency (24hr) Telephone Number			
Agency	Telephone Number	Address	
Emergency Line (SureCall)	1-888-982-7222	N/A	

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TC Energy CGO Leadership			
Name	Title	Office Phone	Cell Phone
	Vice President, CDN Natural Gas Pipelines Operations		
	Director, Wildrose Region		
	Director, Rocky Mountain Region		
	Director, Central Region		
	Director, Eastern Region		

TC Energy employee names and personal contact information have been redacted from this section.

Site Specific leadership contact information, which does not apply to the entire CGO line of business, is included in the applicable Response Zone Annex

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APPENDIX B: Forms

Company First Responder Kit Forms

- First Responder Responsibilities & Action Checklist (Gas)
- Incident Commander Responsibilities & Action Checklist
- ICS 201 Incident Brief
- ICS 214 Activity Log
- **Emergency Planning Zones**
- Portable Gas Detector Monitoring Measurements Recording Form
- Note Taking Form and Completion Guidelines

All other Incident Management Team Role Kits and ICS Forms can be accessed through the Emergency Management Department Website.

Operating Procedures (Accessible through Controlled Document Library)

- Critical Injury and Fatality Response Procedure
- Emergency Management System Emergency Operations Center Checklist
- Emergency Management System Incident Command Post Kit Requirements Checklist
- **Emergency Management System Maintenance**

Miscellaneous Forms

- Debrief Form
- Evaluation Form Training & Exercises Internal Participants
- **Exercise Authorization Form**
- External Agency Feedback Form

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APPENDIX C: Information Resources for Response

Real-Time Hydrometric Data from Environment Canada

• https://wateroffice.ec.gc.ca/mainmenu/real-time-data-index-e.html

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Response Zone Annexes

Response Zone Annexes			
Response Zone	Description	FileNet Item ID	
1	Wildrose Region Response Zone	1016939210	
2	Rocky Mountain Region Response Zone	1016939215	
3	Central Region Response Zone	1016939218	
4	Eastern Region Response Zone	1016939223	

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