USNG Emergency Response Plan (US)

APPROVALS

Approvals were captured electronically and attached to the published document.

Document Contact	Allison Dye Emergency Preparedness Coordinator, US Safety West Safety & Technical Services, US Safety Programs
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Document Approver	Scott Dearwester Interim Director, US Safety Safety & Technical Services, US Safety Programs

BRIEF DESCRIPTION OF CHANGE

Incorporates routine organizational changes, as well as the following specific improvements:

- Updated EOC language to reflect actual team makeup and purpose.
- Simplify ICS language and positions
- Inclusion of controller actions in initial response
- 72-hour post severe weather inspection guidance
- Removal of legacy IMAT references
- Update Mid-Atlantic Region asset location (remove New Hampshire, Maine, Vermont)
- Removal of Portland Natural Gas Transmission System (PNGTS) due to divestiture of assets
- Updated activation charts
- Updated references to include US Emergency Management website

REVISION HISTORY

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

Rev. No.	Date (YYYY/MM/DD)	Brief Description of Change History	Originator (By)	Reviewer(s) (Checkers)	Approver(s)
07	2025/11/14-Approved	Updated EOC language to reflect actual team makeup and purpose Simplify ICS language and positions Inclusion of controller actions in initial response 72 hr post severe weather inspection guidance Removal of legacy IMAT references Removal of Portland Natural Gass Transmission System (PNGTS) due to divestiture of assets	A. Dye	M. Cooley, P. Shaffer, C. Bowers, B. Hosenfeld, S. Jones, G. Knoettgen	S. Dearwester, M. Kothari, A. Willis

Rev. No.	Date (YYYY/MM/DD)	Brief Description of Change History	Originator (By)	Reviewer(s) (Checkers)	Approver(s)
06	2024/08/16	Annual review; segregates Chesapeake LNG Plant. Incorporates new Major Projects. Inserts USNG Incident Typing. Clarifies the role of EOC Manager as Incident Commander and effected Area Manager as Deputy Incident Commander. Incorporates findings from 2024 American Gulf Hurricane Preparedness Exercise. Added guidance for response to Serious Injuries and Fatalities.	M. Cooley	G. Misenhelder M. Murphy	J. Stiles
05	2023/05/12	Annual review to incorporate lessons learned, regulatory and organizational changes. Implement the “Mega Rule Part 2 (RIN2)”.	D. Frick	D. Michael M. Ladd M. Cooley M. Keller M. Murphy	D. Franzgrote R. Anderson B. Meulenkamp M. Kothari
04	2022/12/01	Annual review to incorporate lessons learned, regulatory and organizational changes.	D. Frick	D. Michael M. Ladd M. Cooley M. Murphy R. Anderson	D. Franzgrote M. Kothari
03	2021/10/01	Annual Review, Updated Regions, boundaries, maps, names. Incorporated improvements to the Natural Disaster Procedures. Expanded details on Underground Natural Gas Storage Facilities.	C. Bourque	D. Frick T. Gunter T. Mackie H. Martinez T. Woods S. Miller G. Misenhelder	P. Solylo J. McWilliams W. West

DISTRIBUTION LIST

The Distribution List includes all Vice Presidents and Directors of US Gas Field Operations who are accountable for emergency action in accordance with this Plan. When this Plan is changed, all Plan Holders shall be notified.

Copy No.	Plan Holder	Core	RZ1 Central	RZ2 Mid Atlantic	RZ3 Erie Plains	R4 American Gulf	RZ5 Upland Prairie	RZ6 Great Lakes	RZ7 Heartland	RZ8 Appalachia	RZ9 Pacific Mountain	RZ10 UNGS
01	Meera Kothari, VP US Gas Operations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02	John Corlis, Director Central Region	✓	✓									
03	Mike Kubincanek Director, Mid-Atlantic Region	✓		✓								
04	Tracy Sparks Director, Erie Plains Region	✓			✓							
05	Desiree Cromwell Director, American Gulf Region	✓				✓						
06	Emily Rogers, Director Gas Control & Planning East	✓	✓	✓	✓	✓				✓		
07	Jessi Harden Murray Director, Gas Control & Planning West	✓				✓	✓	✓	✓		✓	

Copy No.	Plan Holder	Core	RZ1 Central	RZ2 Mid Atlantic	RZ3 Erie Plains	R4 American Gulf	RZ5 Upland Prairie	RZ6 Great Lakes	RZ7 Heartland	RZ8 Appalachia	RZ9 Pacific Mountain	RZ10 UNGS
08	Grant Knoettgen Interim Director, Upland Prairie Region	✓					✓					
09	Scott Hoelscher Director, Great Lakes Region	✓						✓				
10	Dustin Enright Director, Heartland Region	✓							✓			
11	Sue Burla Interim Director, Storage Technical Services	✓	✓	✓	✓			✓		✓		✓
12	Rene Norman Director, Appalachia Region	✓								✓		
13	Jeff Pollock Director, Pacific Mountain Region	✓									✓	
14	Scott Dearwester Interim Director US Safety Execution	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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ADMINISTRATION

Facility Information and Modifications

General Information		
Facility Name	US Natural Gas (USNG)	
Owner's Name	TC Energy	
Address	Physical Address: 700 Louisiana Street Houston, TX 77002	Operator's Address: 450 1st Street SW Calgary, AB T2P 5H1
Plan Contact	Allison Dye TC Energy Center 14301 FNB Parkway Omaha, NE 68154	

Facility and Pipeline Locations and Underground Natural Gas Storage Locations		
States	Response Zone 1 Central Region	Kentucky, Maryland, Ohio, Virginia, West Virginia
	Response Zone 2 Mid-Atlantic Region	Delaware, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Virginia, West Virginia
	Response Zone 3 Erie Plains Region	Ohio, Pennsylvania, West Virginia
	Response Zone 4 American Gulf Region	Arkansas, Indiana, Kentucky, Louisiana, Mississippi, Tennessee
	Response Zone 5 Upland Prairie Region	Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, Wyoming
	Response Zone 6 Great Lakes Region	Michigan, Minnesota, Wisconsin
	Response Zone 7 Heartland Region	Illinois, Indiana, Michigan, Ohio, Wisconsin
	Response Zone 8 Appalachia Region	Maryland, New York, Ohio, Pennsylvania, West Virginia
	Response Zone 9 Pacific Mountain Region	Arizona, California, Idaho, Nevada, Oregon, Washington, Wyoming
	Underground Natural Gas Storage Response Zone	Michigan, New York, Ohio, Pennsylvania, West Virginia

Regulatory Cross Reference

Regulation		
Code	**Description/Summary**	**Location in Plan**
49 CFR 192 (DOT)		
§192.615	**Emergency Plans** (a) Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following: (1) Receiving, identifying, and classifying notices of events which require immediate response by the operator. (2) Establishing and maintaining adequate means of communication with the appropriate public safety answering point (i.e., 9–1–1 emergency call center), where direct access to a 9–1–1 emergency call center is available from the location of the pipeline, and fire, police, and other public officials. Operators may establish liaison with the appropriate local emergency coordinating agencies, such as 9–1–1 emergency call centers or county emergency managers, in lieu of communicating individually with each fire, police, or other public entity. An operator must determine the responsibilities, resources, jurisdictional area(s), and emergency contact telephone number(s) for both local and out-of-area calls of each Federal, State, and local government organization that may respond to a pipeline emergency and inform such officials about the operator's ability to respond to a pipeline emergency and the means of communication during emergencies. (3) Prompt and effective response to a notice of each type of emergency, including the following: (i) Gas detected inside or near a building. (ii) Fire located near or directly involving a pipeline facility. (iii) Explosion occurring near or directly involving a pipeline facility. (iv) Natural disaster. (4) The availability of personnel, equipment, tools and materials, as needed at the scene of an emergency. (5) Actions directed toward protecting people first and then property. (6) Taking necessary actions, including but not limited to, emergency shutdown, valve shut-off, or pressure reduction, in any section of the operator's pipeline system, to minimize hazards of released gas to life, property, or the environment. (7) Making safe any actual or potential hazard to life or property. (8) Notifying the appropriate public safety answering point (i.e., 9-1-1 emergency call center) where direct access to a 9-1-1 emergency call center is available from the location of the pipeline, and fire, police, and other public officials, of gas pipeline emergencies to coordinate and	Entire Plan 4.2 & 5.2 5.2 Section 5 Section 6 5.1 5.1 5.1 5.2

Regulation		
	share information to determine the location of the emergency, including both planned responses and actual responses during an emergency. The operator must immediately and directly notify the appropriate public safety answering point or other coordinating agency for the communities and jurisdictions in which the pipeline is located after receiving a notification of potential rupture, as defined in § 192.3, to coordinate and share information to determine the location of any release, regardless of whether the segment is subject to the requirements of § 192.179, § 192.634, or § 192.636.	5.11
	(9) Safely restoring any service outage.	5.11
	(10) Beginning action under §192.617, if applicable, as soon after the end of the emergency as possible.	5.1
	(11) Actions required to be taken by a controller during an emergency in accordance with §192.631.	Section 5
	(12) Each operator must develop written rupture identification procedures to evaluate and identify whether a notification of potential rupture, as defined in § 192.3, is an actual rupture event or a non-rupture event. These procedures must, at a minimum, specify the sources of information, operational factors, and other criteria that operator personnel use to evaluate a notification of potential rupture and identify an actual rupture. For operators installing valves in accordance with § 192.179(e), § 192.179(f), or that are subject to the requirements in § 192.634, those procedures must provide for rupture identification as soon as practicable.	Section 8 8.5
	(b) Each operator shall:	
	(1) Furnish its supervisors who are responsible for emergency action a copy of that portion of the latest edition of the emergency procedures established under paragraph (a) of this section as necessary for compliance with those procedures.	8.2
	(2) Train the appropriate operating personnel to assure that they are knowledgeable of the emergency procedures and verify that the training is effective.	8.4
	(3) Review employee activities to determine whether the procedures were effectively followed in each emergency.	8.3
	(c) Each operator shall establish and maintain liaison with appropriate fire, police, and other public officials to:	
	(1) Learn the responsibility and resources of each government organization that may respond to a gas pipeline emergency;	
	(2) Acquaint the officials with the operator's ability in responding to a gas pipeline emergency;	
	(3) Identify the types of gas pipeline emergencies of which the operator notifies the officials; and	
	(4) Plan how the operator and officials can engage in mutual assistance to minimize hazards to life or property.	

Acronyms and Definitions

Acronym	Definition
AED	Automated External Defibrillator
CFR	Code of Federal Regulation
DOT	Department of Transportation (US)
EOC	Emergency Operations Center
EPT	Emergency Preparedness Team
ERP	Emergency Response Plan
FASC	Finance & Administration Section Chief
IC	Incident Commander
ICS	Incident Command System
IST	Incident Support Team
L.I.P.S.	TC Energy's Primary Response Goals • L – Life Safety • I – Incident Stabilization • P – Preservation of Property and the Environmental • S – Stakeholder Communication
LOFR	Liaison Officer
LSC	Logistics Section Chief
OPS	Office of Pipeline Safety
OSC	Operations Section Chief
PSAP	Public Safety Answering Point
PSC	Pipeline Safety Compliance (formerly US Regulatory Compliance)
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIO	Public Information Officer
PSC	Planning Section Chief
EOC	Regional Emergency Operations Center
SOFR	Safety Officer
TOS	Technical and Operational Services (Part of USNG)
UC	Unified Command
US	United States
USGO	United States Gas Operations (Part of USNG)
USNG	United States Natural Gas (Part of TC Energy)

1. INTRODUCTION

The United States (US) Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS) Regulation 49 CFR § 192.615 and 49 CFR §192.12 require a pipeline operator to establish written procedures, like this Emergency Response Plan (ERP), that would minimize the hazard resulting from an emergency.

This ERP describes the response actions for the Company's US Natural Gas (USNG) Business Unit and states the requirements for training and exercise which prepare USNG to execute this ERP.

Given the diverse nature of emergencies, it is not feasible to have a specific plan to cover all situations. Therefore, the elements of this ERP must be tempered with good judgment in coping with emergencies.

1.1. Purpose

The purpose of this Plan is to provide uniform emergency response guidelines for all areas and sectors of USNG. It is important that each work location organizes personnel, material, and equipment; establishes internal communications; trains personnel; and sets up communications and liaison with local public officials and agencies in a manner that will provide an effective response to an emergency in accordance with this Plan.

It is the responsibility of each employee to be thoroughly familiar with their role as described within this ERP and, in accordance with this Plan, coordinate his or her efforts in response to any emergency.

All TC Energy employees shall take actions directed toward protecting people first and then property.

USNG's overall emergency response goals can be achieved by effectively implementing this ERP. In the emergency phase of an incident, the four prioritized overarching response goals prevail:

TC ENERGY - USNG PRIMARY EMERGENCY RESPONSE GOALS (L.I.P.S.)

1. Life Safety
2. Incident Stabilization
3. Property & Environment Preservation
4. Stakeholder Communication

1.2. Scope

This ERP is specific to the Company's USNG Business Unit. The information in this Plan, and applicable TC Energy plans, policies, procedures, and references are intended to be the necessary basis for effectively responding to an emergency.

This ERP applies:

- to emergencies, business interruptions, and crises which require prompt coordination of resources, special communications and/or heightened authority for employees;
- to all gas pipelines and underground natural gas storage assets wholly owned and operated by TC Energy's USNG Business Unit as well as all Partially Owned Entities and/or Joint Ventures where USNG has operational control; and

- throughout the asset lifecycle, including construction, commissioning, operation and decommissioning.

This is an all-hazards plan, which means this ERP is applicable to all risks, hazards, types and magnitudes of potential emergencies, including those that require evacuation and emergency shutdown, valve shut-off, or pressure reduction, in any section of the USNG pipeline systems, to minimize hazards of released gas to life, property, or the environment.

This Plan is applied to Project related emergencies in its entirety for Projects occurring on an existing USGO site. For Level C, D and E greenfield Projects, the applicability of this Plan is determined on a case-by-case basis in consultation with the Prime Contractor(s).

This plan does not apply to the Chesapeake LNG Plant; for emergency response at the Chesapeake LNG Plant refer to the Chesapeake LNG Plant Emergency Response Plan (CD90000913).

1.3. Response Plan Structure

USNG recognizes two levels of response planning documents. Descriptions in this section explain each of these documents and their relationships with one another.

1.3.1. Emergency Response Plan

This Plan is designated as the ERP for the Company's USNG assets; it is comprised of written procedures to minimize the hazard resulting from a gas pipeline emergency or an incident impacting a gas pipeline.

This ERP provides the information and guidance necessary for all USNG areas and sectors to prepare and respond to an emergency. 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.

1.3.2. Emergency Response References

Emergency Response References (ERR) are maintained in concert with this ERP and include the most detailed and fluid response information, such as site maps; descriptions of assets; lists of site-specific receptors; specific contact information for internal, community, and emergency notifications; and links to the most used resources and reference materials.

Within USNG, one Emergency Response Reference exists for each county or parish that has USGO assets within its boundaries. If a Project introduces assets into a new county or parish, a new Emergency Response Reference is developed prior to in-service of Operational assets.

The USNG Business Unit is responsible to maintain Emergency Response References in accordance with the applicable Emergency Response Reference Task Package.

1.4. Compliance with Laws and Regulations

This ERP has been developed to address the pipeline transmission safety regulations that pertain to emergency preparedness and planning as found in the Regulatory Cross Reference earlier in this Plan and the following regulations:

- 49 CFR 192.613(c): Continuing Surveillance
- 49 CFR 192.615: Emergency Plans

- 49 CFR 192.12: Underground Natural Gas Storage Facilities

2. FACILITY DESCRIPTION

This ERP is effective across USNG, including:

- US Gas Operations (USGO), which is comprised of approximately 30,000 miles of interstate, natural gas pipelines in 30 states
- Safety and Technical Services (STS), which provides a broad spectrum of technical expertise to USNG (including Health & Safety, Emergency Management, Reliability, Integrity, Strategy and Planning) and oversees operations of 53 underground natural gas storage reservoirs consisting of approximately 4,300 wells in 5 states.

2.1. Description of Site

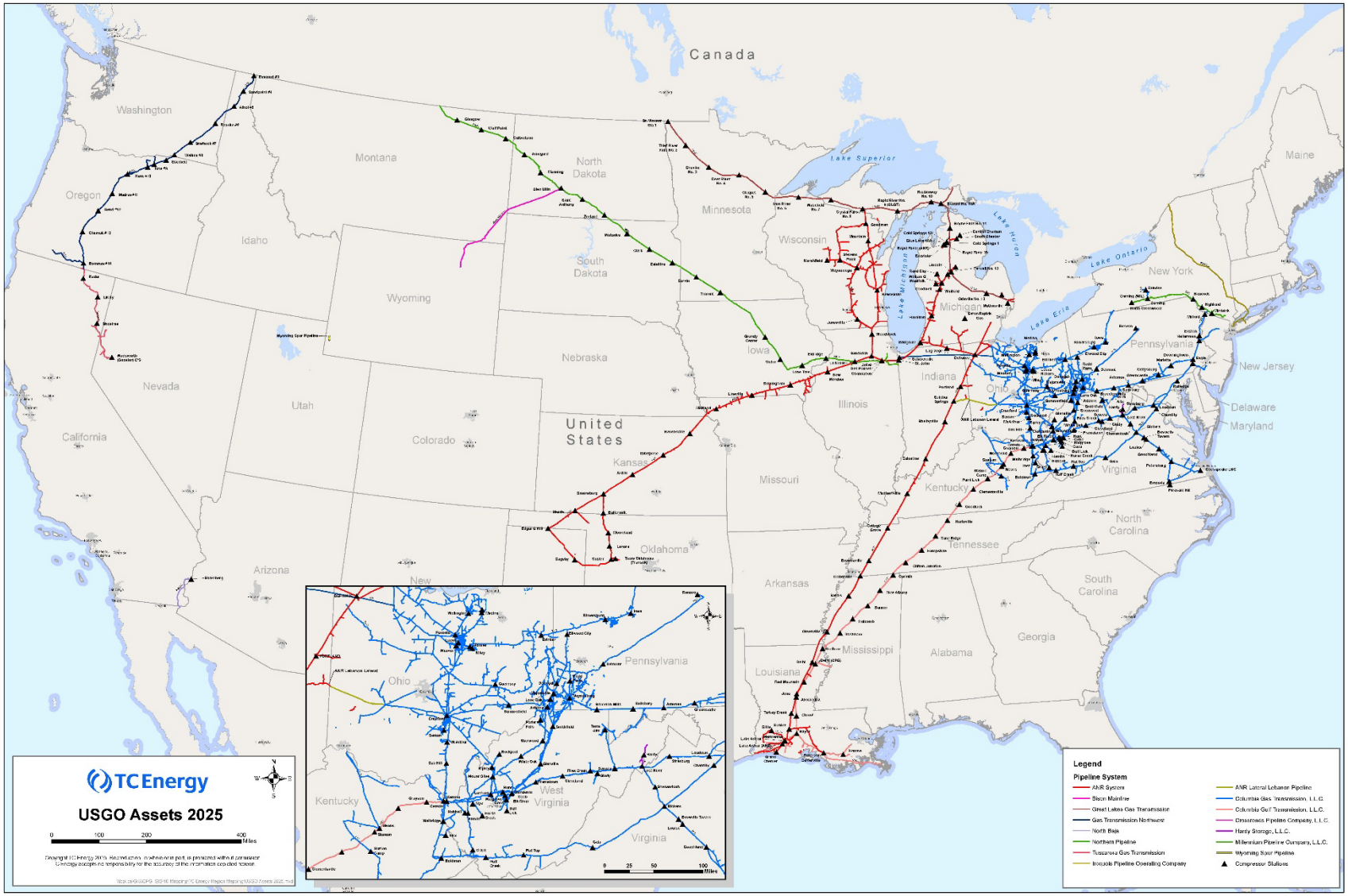
USNG is primarily responsible for transporting and storing natural gas. In general terms, the equipment used to accomplish this mission is pipeline segments, compressor stations, measuring stations, wells and downhole equipment, and valve sites. The specifications and age of this equipment varies greatly.

USNG has presence in the following 30 states with the greatest density of assets in Ohio, Pennsylvania, and West Virginia:

TC Energy's USGO Pipeline and Underground Natural Gas Storage Facility Locations		
1. California	11. Minnesota	22. Pennsylvania*
2. Delaware	12. Mississippi	23. South Dakota
3. Illinois	13. Missouri	24. Tennessee
4. Indiana	14. Montana	25. Texas
5. Iowa	15. New Jersey	26. Virginia
6. Kansas	16. New York*	27. Washington
7. Kentucky	17. North Dakota	28. West Virginia*
8. Louisiana	18. North Carolina	29. Wisconsin
9. Maryland	19. Ohio*	30. Wyoming
10. Michigan*	20. Oklahoma	
	21. Oregon	

*States which contain UNGS

The map on the next page demonstrates USGO's vast network of natural gas pipeline systems.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Louisiana
Alabama
Georgia
South Carolina
North Carolina
Virginia
West Virginia
Pennsylvania
New York
Maine
New Jersey
Delaware
Maryland
Lake Superior
Lake Huron
Lake Michigan
Lake Erie
Lake Ontario
TC Energy
USGO Assets 2025
Legend
Pipeline System

2.2 Site 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 (1019864484): specifies the requirements for First Aid Kit, First Responder Kit (contents listed in Appendix B of this Plan), Safety Flares/Reflective Markers, and Situational Awareness Device(s) in Company vehicles among other emergency and non- emergency equipment requirements.
- Incident Command Post Kit Requirements Checklist (003674777): specifies the requirements for equipment maintained in each Incident Command Post (ICP) Kit.

2.3 Site Security

Company facilities are protected from security breaches. Specific requirements for security protections are defined in the following:

- Physical Security and Security Systems Standard (1020373672): establishes the requirements for implementing physical security and system security measures.
- Physical Security Recurring Activities Task Package (005745269): directs the completion and documentation of mandatory periodic physical security reviews at TC Energy facilities in support of TC Energy's Security Risk Assessment Standard (CAN-US-MEX) (1020373656).

3. HAZARD IDENTIFICATION AND RISK ASSESSMENT

USNG is responsible to identify hazards (both from internal and external sources) which may result in an emergency affecting the Company's activities. The identified hazards are reviewed through a risk assessment to determine the potential likelihood, consequence, and impact of 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 this ERP supports ongoing safe, reliable, and efficient operations in emergencies.

TC Energy's Risk Management Standard (008749510) provides requirements and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management; this Risk Management framework is applicable to all Company assets, including USNG. As such, risk assessments shall be used to develop this ERP and mitigate impacts of the hazard.

3.2 Hazard Identification Matrix

In the table below, asset-based and natural hazards are evaluated for likelihood to produce significant consequence or impact to USNG. Where the potential exists for a hazard to significantly impact USNG, there shall be a procedure to respond to each hazard in Section 5 of this Plan.

Hazard	Potential for Significant Impact USNG	Procedure Included in Section 5
Asset-Based Hazards		
Natural Gas Pipeline Emergencies	x	x
Underground Natural Gas Storage Facility Emergencies	x	x
Natural Hazards		
Avalanche		
Cold Wave		
Drought & Heatwave		
Earthquakes	x	x
Floods (Coastal & Riverine)	x	x
Hurricanes	x	x
Ice Storms & Blizzards	x	x
Landslides & Rockslides	x	x
Thunderstorms	x	x
Tsunami		
Tornadoes & Strong Winds	x	x

Hazard	Potential for Significant Impact USNG	Procedure Included in Section 5
Volcanoes	x	x
Wildfires & Forest Fires	x	x
Technological or Man-Made Hazards		
Security Incidents	x	x
Medical Emergencies	x	x

4. ORGANIZATIONAL CONTROL OF EMERGENCY

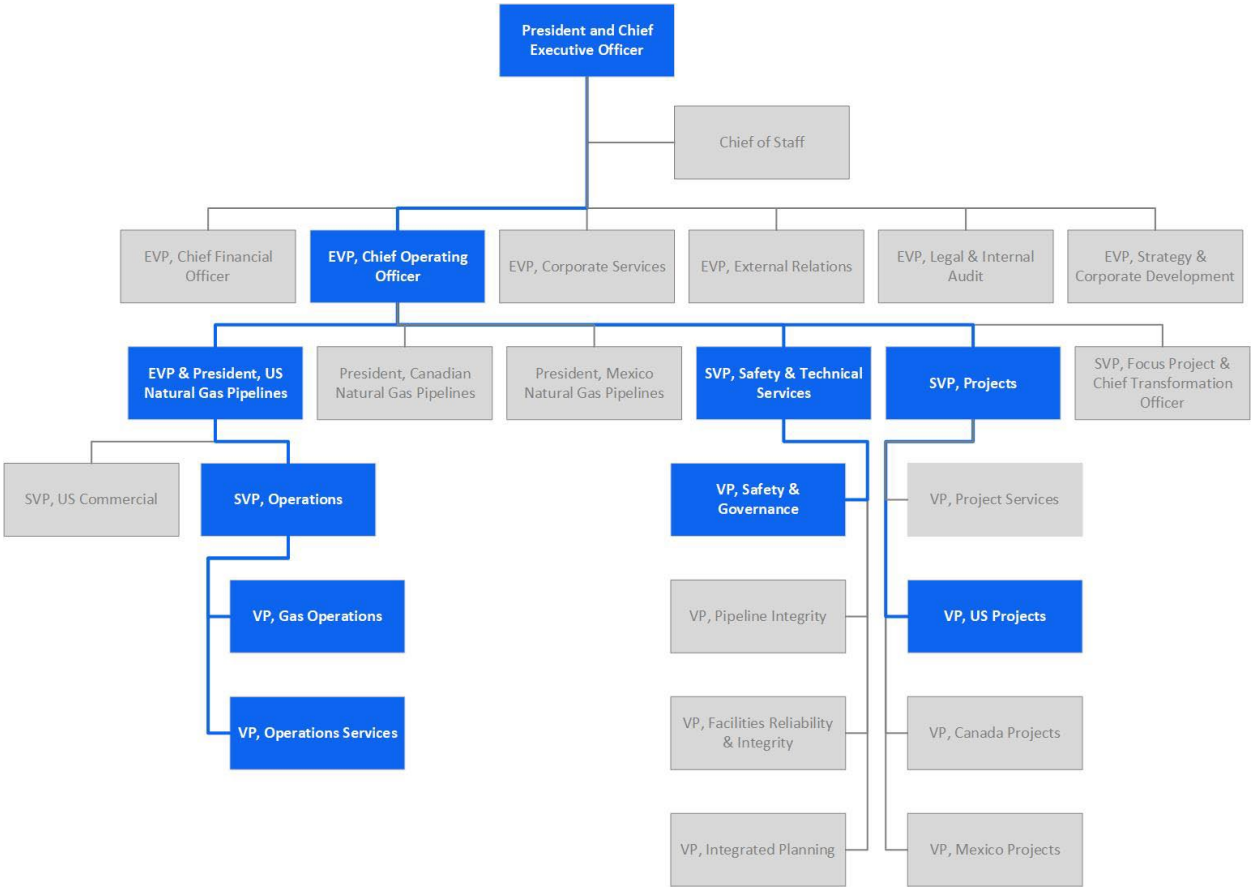
This section describes how the Company's emergency response personnel transition from the standard organization to implementation of the Emergency Response process.

4.1 Standard

The US Natural Gas Pipelines organization includes both US Commercial and US Operations, ultimately reporting to TC Energy's Chief Executive Officer through the Executive Vice President and Chief Operations Officer.

Under the Executive Vice President and Chief Operations Officer; the President of US Natural Gas Pipelines, Senior Vice President of Safety & Technical Services, and Senior Vice President of Projects all have responsibilities for emergency response within their purview, where Operations generally executes emergency response and Safety & Technical Services provides subject matter expertise during all phases of emergency management.

The Vice President of US Gas Operations leads the Regional Directors, who manage geographically diverse areas of the US asset base. This Standard Organization is demonstrated in the diagram below.



4.2 Response Organization

In an emergency, the structure of leadership and decision making may be altered from the standard organizational structure to meet the demands of the incident. Some incidents can be managed by Field Operations but other, more complex incidents, require activation of emergency response functions to manage activities. Activation of emergency response functions is informed by incident complexity and at the discretion of the Incident Commander.

Regardless of Incident Type, all emergencies are managed using the foundational management characteristics of the Incident Command System.

Incident Complexity	
Type 1	Most Complex Emergency
Type 2	Increasingly Complex Emergencies
Type 3	
Type 4	Least Complex Emergency
Type 5	Non-Emergency; Managed by Field Operations

Assigning incident type is subjective and informed by the knowledge and experience of the Incident Commander. However, the complexity factors below reflect the most likely incident type and response posture based on the assumptions of this Plan.

Complexity Factors		Response Posture
Type 5	Less than 6 response personnel needed No support department assistance needed No external reporting required Duration typically <12 hours	Managed by Field Operations
Type 4	Minimal coordination with officials Garners little media attention Incident is uncontrolled Response Phase may exceed 12 hours	Company First Responder - Active Emergency Operations Center - Active
Type 3	Spans multiple jurisdictions Resources required from outside of Ops Area Displaces residents Operational incident causes injury Garners local media attention Requires coordination with public officials Response Phase may exceed 48 hours	Company First Responder - Active Emergency Operations Center - Active —ICS Function Roles Active, select roles, at the discretion of the Incident Commander Incident Support Team - IST Leader Notified CMT – Inform at discretion of IST Leader
Type 2	Displaces multiple residences Operational incident causes fatality Garners regional media attention Response Phase may exceed one week	Company First Responder - Active Emergency Operations Center - Active ICS Function Roles Incident Support Team – Active, at the discretion of IST Leader CMT - Inform

Complexity Factors		Response Posture
Type 1	Operational incident causes multiple fatalities Garners national media attention	Company First Responder - Active Emergency Operations Center - Active ICS Function Roles - Active Incident Support Team - Active CMT - Active, at discretion of CMT Leader

4.3 Emergency Operations Centers

Emergency Operations Centers (EOCs) are regionally based and are off-site functions which support incident management by providing resource coordination, communication, and technical expertise. EOCs are established virtually via MS Teams meeting after being notified through Everbridge.

The EOC is staffed with the following roles:

- EOC Manager activates and staffs the EOC to provide support to the Company First Responder and ICS Function Roles, if activated. The EOC Manager is most often a USGO Regional Manager, and the EOC Manager also serves as the Incident Commander during initial response. The EOC Manager may activate the following support positions as required by the incident; not all positions are staffed in all emergencies.
    - Operations Support provides technical support on operation of the effected asset and Subject Matter Expertise on implementation of ICS within the Operations Section, if activated on-site. This function prepares for the Operations Section to be established on-site, if required.
    - Documentation supports incident management by creating records of incident information and providing administrative support to the EOC.
    - Logistics Support provides incident management assistance by ordering resources as requested by personnel on site. This function is also responsible for ensuring the EOC has the resources required to maintain support for the incident and prepares for the Logistics Section to be established on-site, if required.
    - Planning Support provides incident management assistance by anticipating incident potential and contingency requirements. This function prepares for the Planning Section to be established on-site, if required.
    - Subject Matter Experts from both Corporate and Business Unit functions may be called upon to provide technical expertise and/or resources, if required.
- Upon EOC activation the following core support departments will be notified through Everbridge and representative(s) from each department will be activated to support. Based on incident needs some support departments may be dismissed.
    - Core support departments are: Emergency Management, Environmental, External Relations, Gas Control, Human Resources, Land, Legal, Pipe Integrity Engineering, Pipeline Safety Compliance, Safety, Security, and Storage (in Regions with Storage assets).
    - Secondary support departments could include based on incident needs: Aviation, Gas Measurement, Supply Chain, or Business Continuity.

EOC Role Kits are available on the TC Energy US Emergency Management website to guide the specific actions of the EOC staff.

The EOC has the ability to access any information that would be useful in assisting with response to emergencies. Useful documents could include:

- Emergency Response Plan (reference where a soft copy of this plan can be located)
- Emergency Response References
- Direction and Location maps to facilities (if applicable)
- Pipeline schematics/Facility drawings (if applicable)
- Applicable facilities contact list(s)
- Applicable regulatory contacts
- Emergency isolation procedures
- Communication Information:
  - Current Satellite phone numbers
  - Current cell numbers for staff in Region Office/Facility
  - Conference phone numbers
- Current employee contact list including job title, work location, and home phone numbers.

4.4 Incident Command System (ICS)

When ICS is initiated, the chain of command is delegated to the Incident Commander (IC) and all command and general staff involved in the incident report using the ICS hierarchy. The IC becomes the person responsible for all aspects of an emergency response, including quickly developing incident objectives, managing all incident operations, and assigning resources. The IC has responsibility for all people involved even if the person filling the role of IC is not a Company leader during routine operations; this is a foundational management characteristic of ICS.

Often, the IC requires support of other Company resources to manage an emergency. These additional resources may include:

- Emergency Operations Center (EOC): When an EOC is activated to support an on-site event, EOC staff report to the EOC Manager and may act in support of the ICS hierarchy. Support may include moving into an ICS Function Role.
- Incident Support Team (IST): When an IST is activated, the IST Leader determines how the IST will engage with the EOCs and/or ICS Function Roles to support the incident.

In addition to the resources listed above, the following groups shall also be engaged in response and kept informed of the incident status:

- Gas Control Center, including Monitoring Center(s)
- Local Company leadership

Each of the above listed resources should work in concert with one another to ensure:

1. Timely and accurate information is shared, and
2. Response efforts are carried out without duplication of efforts.

As with the Company's standard organization, ICS applies a single chain of command, unity of leadership, and a managed span of control. However, roles and reporting relationships can change to align with the principles of 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.

This section summarizes response resources and ICS elements that may be activated.

4.4.1 Company First Responder

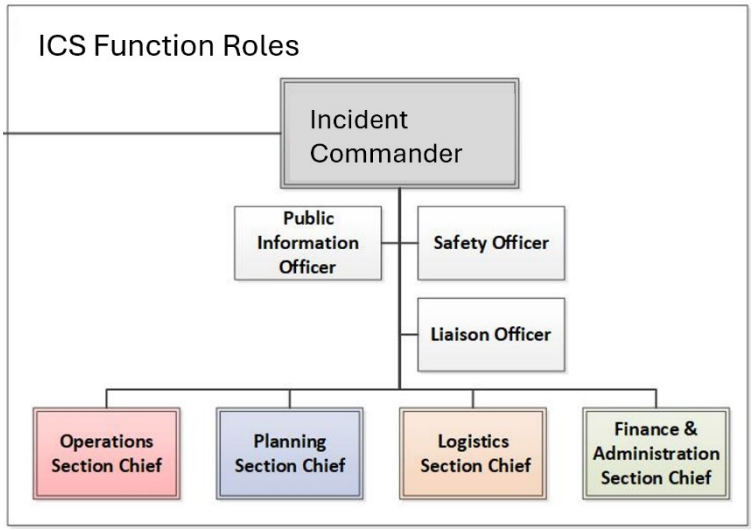
The Company First Responder (CFR) is TC Energy's first official representative at the emergency site. The CFR role is most likely a USGO Field Technician. The CFR shall refer to the First Responder Responsibilities & Action Checklist (05980754) to guide response activities.

4.4.2 ICS Function Roles

ICS is a standardized approach to the command, control, and coordination of emergency response that provides a common framework within which responders from multiple agencies can be effective. This standardized approach allows for expansion and contraction of emergency response, depending on the incident size, type, and complexity. Is the responsibility of the Incident Commander (IC) to determine the appropriate ICS organization based on the event. The Incident Commander (IC) has the ability to utilize the ICS Function Role Roster (internal and/or qualified third-party vendor) to fill the ICS organization. The roles of the qualified vendors are administrative support in nature, such as planning, logistics, and finance and they will not be performing a covered function.

ICS Function Role Roster is an available group of professionals trained to support incident responses. Their primary objectives typically include setting objectives, managing resources and logistics, and otherwise supporting personnel responding to an incident. These roles may be deployed to an emergency site if the incident response exceeds span of control of the CFR and the local operations personnel.

The ICS Function Role Roster participants could include main command and general branch staff roles, such as: Incident Commander (IC), Planning Section Chief (PSC), Safety Officer (SO), Liaison Officer (LOFR), Operations Section Chief (OSC), Logistics Section Chief (LSC), Public Information Officer (PIO), and Finance/Administration Section Chief (FASC). The ICS Function Roles roster should be filled with trained personnel with the ability to respond to an incident, in the event of an activation.



4.4.3 Command Staff Roles and Responsibilities

The Incident Commander (IC) has responsibility for overall management of the incident in alignment with the response goals and objectives. Within USNG, the IC is initially the EOC Manager, who is typically a Regional Manager. The EOC Manager/IC may delegate on-scene decision making responsibility to a Deputy Incident Commander, who is typically the effected Area Manager.

The Safety Officer (SOFR) develops and recommends measures for assuring personnel safety by identifying hazards and assessing and/or anticipating hazardous and unsafe situations.

The Public Information Officer (PIO) is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations. The PIO works collaboratively with TC Energy External Relations personnel to develop consistent, accurate, and timely messaging.

The Liaison Officer (LOFR) is the contact for assisting and/or cooperating Agency Representatives. The LOFR differs from the PIO role where the LOFR works with governmental representatives and leaders from affected agencies and jurisdictions. The LOFR is responsible for coordinating information sharing with all impacted agencies and groups; this includes landowners, indigenous communities, rightsholders, homeowner associations, regulatory bodies, and municipalities.

4.4.4 General Staff Roles and Responsibilities

The remaining four major management activities (Operations, Planning, Logistics, and Finance/Administration) are referred to as Sections within ICS, and the leaders of these sections are called Section Chiefs.

The Operations Section is responsible for the management of all tactical operations directly applicable to the primary mission. The Operations Section is responsible for executing tactics in the Incident Action Plan (IAP).

The Operations Section Chief (OSC) has the following specific responsibilities:

- directs the preparation of operational plans,
- requests or releases resources,

- monitors operational progress, and
- makes expedient changes to the IAP, as necessary

The Planning Section is responsible for the collection, evaluation, dissemination and use of incident information and maintaining status of assigned resources. A Planning Section Chief (PSC) may assign the following roles within the Planning Section to build a more robust team to meet the demands of the incident:

- Technical Specialists have specialized knowledge and expertise. Technical Specialists may function within the Planning Section or be assigned wherever their services are required.

The Logistics Section is responsible for providing facilities, services, and material in support of the incident, and is led by the LSC.

. The Finance/Administration Section provides cost analysis data for the incident and ensures that equipment and personnel for which payment is required are properly identified, obtains and records all cost data, analyzes and prepares estimates of incident costs, handles injury compensation and claims, financial matters involving vendor contracts, and is responsible for recording time for incident personnel and hired equipment. Finance/Administration Section (FASC) is responsible for all financial, administrative and cost analysis aspects of the incident

4.4.5 Unified Command

During an emergency, the command of an incident may transition from the Company to a local emergency response agency of the jurisdiction (e.g., Fire or Police Chief, etc.), or a state 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; or
- 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 a TC Energy IC works in a consultative manner under Unified Command (UC) with the IC of local jurisdiction as Unified Commanders.

UC is applicable to, but not mandatory for, an incident that is multi-jurisdictional in nature. When enacted, UC is ideally limited to a team of two to five commanders who:

- Have legal authority and (preferably primary) jurisdiction;
- Have delegated authority to make decisions on the spot;
- Bring personnel to the incident that are needed as part of the Operations Section;
- Agree to a common planning framework and one set of objectives;
- Create a single, coordinated IAP per operational period;
- Jointly nominate or agree upon one OSC;

- Share one Incident Command Post; and,
- Speak with one voice.

4.4.6 Incident Command Post

The Incident Command Post (ICP) is the location at which the primary Command functions are performed. The IC is typically stationed at the ICP. All incidents shall have a designated ICP, and there shall be only one Incident Command Post.

Location of the ICP should consider the following criteria:

- the nature of the incident,
- whether the incident has potential to grow or move; and,
- whether the location is suitable in size and is safe for the expected duration of the incident.

The ICP may be in a vehicle, trailer, or tent; however, if the incident duration is expected to be more than a few hours, a building (i.e. Company office, hotel conference room) is recommended for use as the ICP.

As soon as practicable, after establishing the Incident Command Post, a Command Post Kit should be delivered to site.

4.5 Incident Support Team

Senior management shall be engaged during all emergencies that occur in TC Energy. This may occur concurrently with an ICS Function Roles and EOC activation but may also occur for significant incidents that do not meet the definition of emergency.

In all emergencies the IC has the authority to make all decisions related to the event. Senior Management may provide general direction and establish goals and priorities as necessary, but the IC (or UC) leads the response efforts.

When senior leadership is involved for this purpose, the group is identified as an Incident Support Team (IST). An IST is led by the Vice President of USGO or their delegate. The IST is responsible for its activation, notification and communication methods.

Members of the IST for USNG include Vice Presidents or Directors from the following corporate support departments, or groups:

- The IST is chaired by the Vice President of USGO (or formal delegate) and has representation from some or all of the following areas:
  - Management from the affected region/facility
  - Asset Integrity
  - Control Center
  - Commercial
  - Emergency Management
  - External Relations

- Human Resources
- Legal
- Projects
- Safety
- Security
- Technical & Operational Services (TOS)
- Regulatory Compliance

5. PLAN IMPLEMENTATION

The Company is committed to conducting business in a safe and responsible manner. When an emergency occurs, the Company will take prompt action to protect public safety, limit the impact 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. In all cases, the following assumptions are assumed during emergency response:

- Company employees who respond to an emergency should perform their work in the safest manner with the utmost regard for the safety of themselves and the public, then the environment and property.
- All Company policies and procedures, as well as the appropriate Job Safety Analysis (JSA), should be followed and reviewed before work is performed.
- All persons who perform a task covered by 49 CFR 192, Subpart N, shall be qualified according to the Company Operator Qualification Plan.
- Company personnel responding to an emergency must be trained to assure that they are knowledgeable of the emergency procedures.
- Company personnel must know the regulations and authorities of the jurisdiction they are operating in with regard to mandating public evacuations; TC Energy personnel do not mandate public evacuations unless specifically authorized to do so by local regulation.

5.1 Response Process

This Response Process section applies to all emergencies – all hazards, and all USNG assets. However, the following high risk emergency situations are defined later in this section: :

- Gas detected inside or near any building, especially buildings used or intended for human occupancy.
- Fire located near or directly involving a USNG facility.
- Explosion occurring near or directly involving a USNG facility.
- Natural disasters, or other outside forces which create a potential or actual emergency.
- Security Incidents, including bomb threats and suspicious packages.

While all events reported to the Monitoring Center are investigated, only certain events may require an immediate response by the Company. The Monitoring Center maintains written procedures for receiving, identifying, and classifying notices of events which require immediate response by the operator.

5.1.1 Monitoring Center and Control Center

The Monitoring Center and Control Center play critical role in response to USNG emergencies.

The Monitoring Center and Control Centers' actions are guided by specific plans, manuals, procedures and guidelines.

When an emergency is detected, the Control Room makes the following notifications as required by procedure or as directed by the Company First Responder:

- Emergency Services, if requested by the Company First Responder
- Operations Area Manager for the affected Region or Facility

Additionally, the Control Room may take some or all of the following actions in accordance with procedures:

- Verify the authenticity of the emergency using:
  - SCADA system where available
  - First Responder verification
  - Reports from emergency service agencies
    - Note: The investigation includes immediate contact with the Public Safety Access Points (PSAP) (9-1-1 Emergency Call Center) serving the area to inquire if the PSAP has received any reports that indicate a possible pipeline emergency.
  - Reliable resources (Gas Operations personnel, other industry, etc.)
  - Emergency Line (Monitoring Center)
- Provide text and voice file to EOC, upon request.
- Develop an isolation strategy and commence initial isolation in conjunction with the Region EOC.

Actions of Monitoring Center and Control Center
Monitoring Center • Dispatch Company personnel to the location of the emergency. • Notify the Operations Manager immediately. • Remain accessible to the Company First Responder/ICS Function Roles to keep informed of significant changes. • Create MC Log and record time any Company personnel is dispatched • Notify the PSC in coordination the Regional Emergency Operations Centers (EOCs) (PSC would make regulatory notifications if necessary) Gas Control • Record time any valves were opened or closed as required to stabilize the incident • Record time any facilities were isolated as required to stabilize the incident

Actions of Monitoring Center and Control Center
• Determine whether there is need for emergency shutdown or pressure reduction to minimize hazards to life or property • If emergency shutdown or pressure reduction is required, coordinate actions with company First Responder. • Continue to monitor any effected and adjacent facilities • Confirm actions of the Monitoring Center were complete, as prescribed above, or complete those actions on behalf of the Monitoring Center. Gas Control On-Call / Manager • Identify loss of markets and notify Commercial Team of findings. • Where an emergency results in a service outage, notify the appropriate personnel or Company officials as soon as possible. • Notify Gas Control Management Team of the event • Participate in EOC if needed

5.1.2 Company First Responder

The first Company representative 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 emergency must be both 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 Company First Responder Checklist, or as summarized in the table on the follow page.

Company First Responder *Refer to Company First Responder Checklist for more detailed guidance.*

• Do not put yourself at risk:
  ○ Develop and communicate JSA prior to commencing response operations.
  ○ If approaching the scene, don appropriate Personal Protective Equipment (PPE).
  ○ Maintain a safe distance from the scene (uphill and upwind, if possible).
  ○ For leak, maintain 800 meters (1/2 mile) safe zone until specific emergency planning zone size verified
• Verify emergency exists.
  ○ If the integrity of the facility is compromised, use the Emergency Shut-Down (ESD) or otherwise isolate the facility.
• Call 9-1-1 for any life-threatening emergencies.
  ○ Delegate notification of local responders/officials to the EOC if there is no life threatening emergency.
• Notify the Monitoring Center/Control Center and provide them with details of the incident.
• Log all decisions and actions taken during response on the ICS Form 214a – Individual Log.
• Conduct initial hazard assessment.

Company First Responder *Refer to Company First Responder Checklist for more detailed guidance.*
○ Ensure immediate notification of the Public Safety Answering Point (PSAP or 9-1-1 dispatch center) for planned and unplanned responses, and after receiving notification of a potential pipeline rupture; this notification may be delegated to the EOC. ○ Inquire if the PSAP has received any reports that indicate a possible pipeline or natural gas storage field emergency. Indication of possible facility emergencies may include reports of leaking gas, fire or explosions near or involving a pipeline or underground storage field facility or natural disasters. • Brief Operations Manager and EOC when contacted about emergency event details. • Represent TC Energy under Unified Command with emergency services and municipal authorities at the scene if Unified Command is established. • Take action to make safe any actual or potential hazard to life or property. ○ Secure the site. ○ Evacuate immediate area if necessary to preserve life/health. ▪ TC Energy personnel can recommend evacuations and advise the public of hazards, but TC Energy does not mandate public evacuations unless specifically authorized to do so by local regulation. ▪ Collaborate with local emergency services to understand resources for conducting evacuations (i.e. reverse 9-1-1). ▪ Collaborate with local emergency services before re-opening evacuated areas to the public. ○ Isolate the source of the emergency. • Instruct people not to touch or move anything on scene in an effort to preserve any evidence except to preserve life or prevent injury. • If approached by the media provide a Media Relations Card or 1-800-608-7859. • Immediately share this information with any emergency services personnel at the site. • Remain in communication with EOC.

5.1.3 Area Manager

The effected Area Manager is typically designated as a Deputy Incident Commander with responsibility for directing the Company's on-scene, tactical response operations. Specifically, they shall take the actions summarized in the table below.

Area Manager
• Provide support to the Company First Responder and ICS Function Roles • Consult with the Regional Manager and Emergency Management representative to determine if EOC activation is appropriate. • Ensure local emergency response agencies and public officials are contacted. • May act as Incident Commander, Deputy Incident Commander or Operations Section Chief in accordance with incident demands and personal training.

5.1.4 Regional Manager

The Regional Manager is responsible for ensuring the Response Process described in this Plan is followed. Typically, the Regional Manager also serves as the Company's initial Incident Commander. Specifically, they shall take the actions summarized in the table below.

Regional Manager

• Serve as the initial incident commander, unless relieved by atrained individualProvide oversight, direction, and support to the Area Manager and the ICS Function Roles, as applicable. ICS FUNCTION ROLES.
• Use Everbridge to activate the EOC, when warranted.
• Lead the EOC using the MS Teams.
  ○ Ensure the MS Teams EOC meeting is opened, maintained, and monitored to allow conferencing between the site and EOC members.
  ○ EOC and ICS Function Roles: The EOC Manager may serve as the Incident Commander, as needed.
  ○ Facilitate effective conferencing between the site and EOC members; consider using the EOC Briefing Agenda Template to organize briefings.
• Ensure the EOC is properly staffed and EOC Actions and Responsibilities are executed, including:
  ○ Ensure local emergency response agencies and public officials are contacted.
  ○ Ensure State One-Call (811) is made for all ground disturbance activities, including those required for emergency response.
• Ensure the next level leader (i.e. Regional Director) is aware of the situation.

Staff in the EOC are guided by EOC Role Kits maintained on the US Emergency Management website.

5.2 Notifications

Once the Company is aware of an emergency, internal and external notifications must be promptly completed to meet the Company's Primary Response Goals.

- Internal Notifications are completed to activate the TC Energy Response Organization
- External Notifications are completed to engage public agencies and industry partners who have a role in the response

The first notification should be to 9-1-1 or Emergency Services to address any life safety concerns. All Employees are empowered to call 9-1-1 if they observe a situation or event which puts the safety of employees or the public at risk.

5.2.1 Internal Notifications

If an emergency is identified by the public or any non-TC Energy employee, the person observing the emergency should notify TC Energy through the 24hr Emergency Telephone Line. (TC Energy 24hr Emergency Telephone Line phone numbers are included in Appendix A of this plan, as well as on all Right of Way Markers and Facility Signage.)

- For USGO East, the 24hr Emergency Telephone Line is answered by the 24hr Monitoring Center in Charleston, WV.
- For USGO West, the 24hr Emergency Telephone Line is answered by the 24hr Monitoring Center in Houston, TX.

Crossroads Pipeline is controlled by USGO East Gas Control. Crossroads operations personnel report to USGO West. In the event of an emergency, Crossroads operations technicians/personnel should contact USGO East Monitoring Center.

The Monitoring Centers work closely with Gas Control to address public reports of an emergency, determine if the incident can be remotely isolated, and dispatch Company First Responders to verify the emergency.

When a call about an emergency is received by the Monitoring Center, a staff member gathers as much information as possible during the initial call to identify whether there is an emergency, classify the notice, and report the status of the emergency to Gas Control when immediate response is required.

If notification of an emergency is received by any Company personnel besides the Monitoring Center, the person receiving the notification must take the caller's name and call-back number before referring the caller to the 24hr Emergency Telephone Line. The Monitoring Center/Gas Control Center is the official first point of contact for all emergencies. The information gathered and recorded is listed on the next page.

Information Recorded by the 24hr Emergency Telephone Line

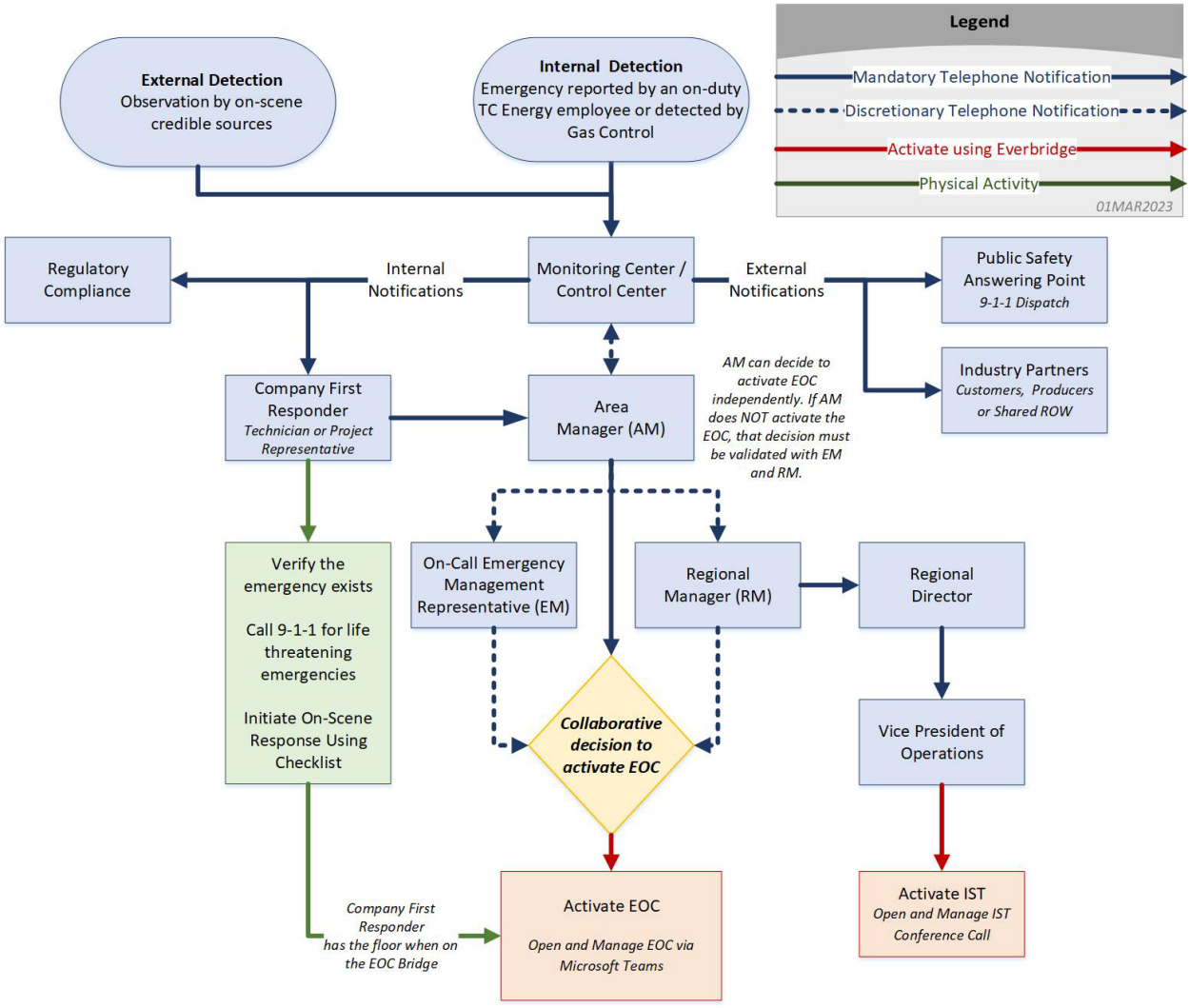
Staff from the 24hr Emergency Telephone Line (Monitoring Center/Gas Control) document the date and time the call is received, and (at minimum) the following information from the caller:

- Name of the caller and telephone number where they can be reached
- Address or location of the emergency including the name of the building or facility involved, if applicable
- Whether there is evidence of a gas or substance release (i.e. audible noise of blowing gas)
- Time of the event (i.e. approximate start and duration)
- Whether there are injuries or fatalities (If there are injuries or fatalities, refer to the Critical Injury and Fatality Response Procedure (CAN-US-MEX))
- Whether there was a fire or explosion
- Whether local emergency officials have been notified and if they are on-scene

Tasks in Section 5.1 of this Plan detail the specific notification accountabilities for internal members of the response organization.

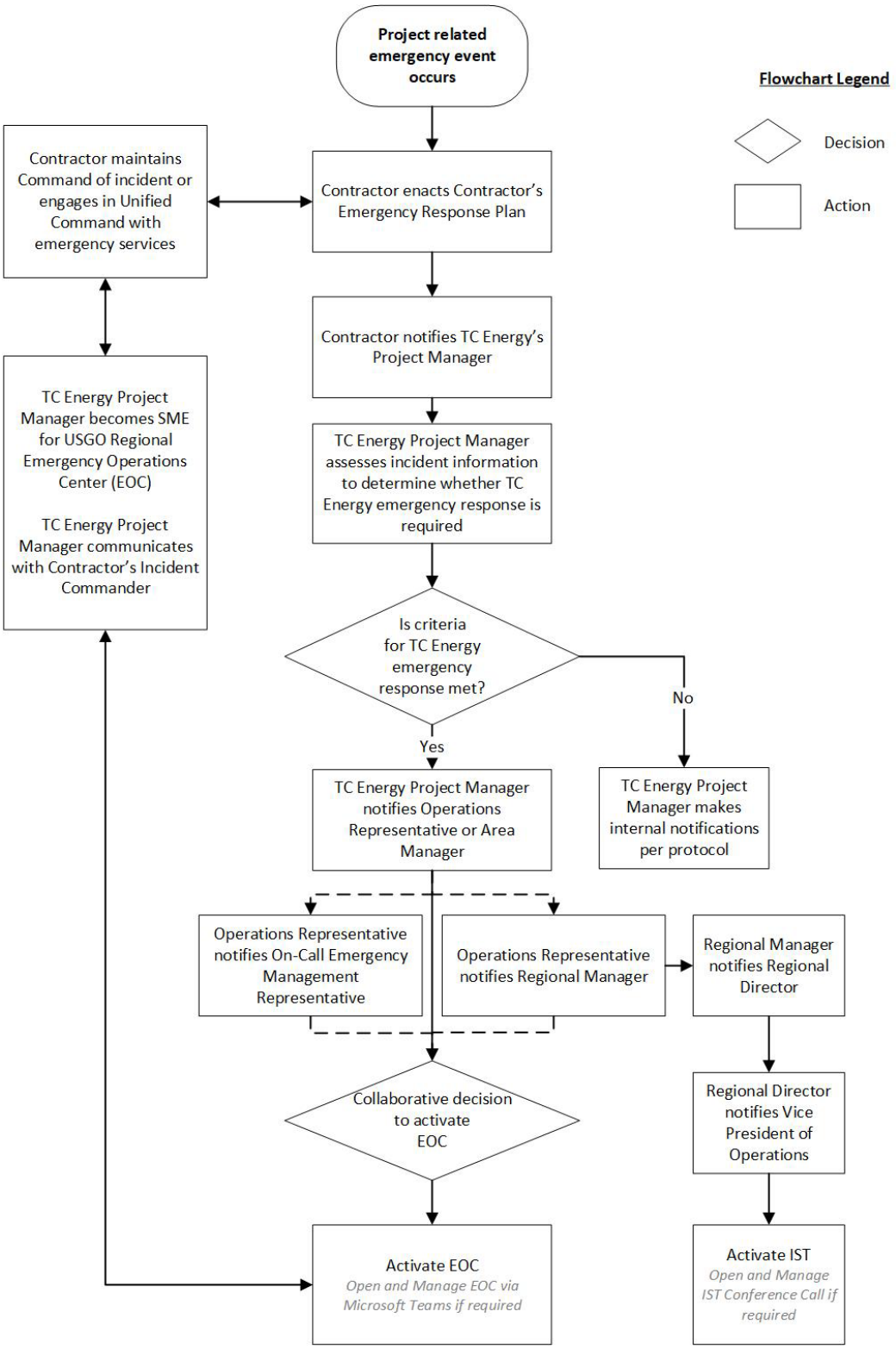
This internal notification and communication process is also depicted in the diagram on the next page.

Operations Initiated Emergency Response



If an incident with a TC Energy Project necessitates activation of the Emergency Organization, the internal notification and communication process is depicted in the diagram on the next page.

Project Initiated Emergency Response



5.2.2 External Notifications

After TC Energy learns of a Company emergency (including notification of potential rupture) several members of the internal response organization are accountable to notify regulators, public agencies, and industry partners.

If a risk to the safety of employees or the public is identified, the first external notification should be to the PSAP/9-1-1 or other Emergency Services to address any life-threatening emergencies.

After life safety concerns are addressed, the following groups are accountable for ensuring specific external notifications are completed:

- Pipeline Safety Compliance (PSC)
  - Federal Agencies, as required by regulation and/or as a courtesy notification
  - State Agencies, as required by regulation and/or as a courtesy notification
- Regional Emergency Operations Center (EOC)
  - Local Emergency Services through the PSAP, including appropriate fire, police, and emergency medical services.
  - Public Officials
  - State-One Call (8-1-1), if ground-disturbance is expected
- Gas Control/Commercial
  - Impacted Customers and Producers

5.3 Gas detected inside or near a building

Gas Detected Inside or Near a Building
In the event of a gas odor inside or near a building, the following actions should be taken: • Avoid or eliminate possible ignition sources, such as cigarettes and open flames or sparks. (Additional ignition sources may include electric switches, light switches, door bells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, or static electricity.) • Do not cellular telephones or other electronic equipment in the vicinity. • Do not operate light switches, doorbells, garage door openers or thermostats as they 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. • Direct people away from the area for their own safety. • Asked people not to return to the building or residence until the area is determined to be safe. • The appropriate on scene emergency response official or utility company may provide additional guidance for ventilation. • Immediately evacuate to a safe area. • Contact the Monitoring Center/Gas Control Center to open a log and communicate updates

5.4 Line Rupture, Fire or Explosion

Pipeline Rupture, Fire, or Explosion
In the event of a pipeline rupture, fire or explosion, the following actions should be taken: • Immediately evacuate people in the general vicinity to a safe area, approximately ½ miles away. • Direct vehicular traffic away from area. • If a Company natural gas transportation facility is involved, no attempts shall be made to extinguish the fire, if the fire is beyond the incipient stage. • Only qualified Company personnel should operate pipeline valves or equipment. • Emergency Services may attempt to extinguish fires on nearby buildings or property to prevent damage. • Avoid or eliminate possible ignition sources, such as cigarettes and open flames or sparks. (Additional ignition sources may include electric switches, light switches, door bells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, or static electricity.) • Do not use cellular telephones or other electronic equipment in the vicinity. • Contact the Monitoring Center/Gas Control Center to open a log and communicate updates • Determine if any additional manpower, tools, and equipment are necessary to make repairs. Secure these additional needs from the most convenient sources.

5.5 Impending or Actual Loss of Underground Natural Gas Storage Well Control

When response to a UNGSF is necessary, Storage Technical Services shall be notified and kept informed of the event. To adhere to regulatory requirements for Underground Natural Gas Storage Operators, “the operator shall develop and implement a structured emergency preparedness/response plan in order to address accidental releases, equipment failures, natural disasters, and third-party emergencies.” As covered in Section 5.1 Response process, “the ERP applies to all emergency events – all hazards”, which includes accidental releases, equipment failures, third party emergencies, and natural disasters that threaten UNGSF.

Impending or Actual Loss of Well Control
In the event of an impending or actual loss of well control, the following actions should be taken: • Immediately evacuate people in the general vicinity to a safe area, approximately ½ miles away. • Direct vehicular traffic away from area. • If a Company underground natural gas storage well is involved, no attempts shall be made to extinguish the fire, if fire is present. • Only qualified Company personnel should operate pipeline/well valves or equipment. • Emergency Services may attempt to extinguish fires on nearby buildings or property to prevent damage. • Avoid or eliminate possible ignition sources, such as cigarettes and open flames or sparks. (Additional ignition sources may include electric switches, light switches, doorbells, garage door openers, thermostats, electrical motors, firearms, vehicles, telephones, emergency radios, construction equipment, or static electricity.) • Do not use cellular telephones or other electronic equipment in the vicinity. • Contact the Monitoring Center/Gas Control Center to open a log and communicate updates • Contact Storage Technical Services to evaluate the need to open the Storage Well Blowout Contingency Plan (US) (EDMS No. 1019004417)

Impending or Actual Loss of Well Control
• Determine if any additional manpower, tools, and equipment are necessary to make repairs. Secure these additional needs from Underground Natural Gas Storage Equipment, Materials, and Contractors (65608562) of from the most convenient sources.

5.6 Response to Natural Hazards

The following sections summarize measures that may be taken, provided adequate time and resources are available in preparation for, response to, and recovery from natural disasters.

Field Operations is accountable for ensuring these activities occur when appropriate, but Field Operations may consult with or delegate responsibility for these actions to contractors or internal support services as deemed appropriate.

When response to a natural disaster is necessary, the Monitoring Center/Gas Control Center shall be notified and kept informed of the event.

5.6.1 Post Extreme Weather & Natural Disaster 72-hour Inspection Requirements

This section defines extreme weather and the minimum criteria for weather events requiring an inspection that must commence within 72-hours after the point in time when it is determined that the affected area can be safely accessed by personnel and equipment.

The purpose of this section is to provide guidelines to meet requirements in 192.613(c), and guidance on when to perform the initial inspection to determine the extent of any damage and identify the need for additional inspections. Initial inspections can be performed by visual observation by conducting ground patrols or aerial patrols. If an emergency condition is found during these initial inspections, the monitoring center should be notified as soon as possible and the EOC activated, if additional support is needed.

For more complex weather events or natural disasters, Operations, Pipe Integrity, Pipe Integrity Weather and Outside Forces, Pipeline Safety Compliance, and Emergency Preparedness may be consulted to help assess the nature of the weather events and the physical characteristics, operating conditions, location, and prior history of the affected pipeline in developing a comprehensive inspection plan. The appropriate EOC may be activated to support the development of this initial inspection plan.

Prioritize inspections based on the highest potential impact to life safety, and then property and environment. The following inspection locations may be taken into consideration and prioritized appropriately based on the extreme weather or natural disaster impacts and characteristics:

- HCA/MCA
- Class 3 or 4 locations
- TC Energy Compressor Stations
- TC Energy Measurement and Regulator Station, Valve Yards, other above ground pipe locations
- Areas with the potential for landslides (example: Known very high-risk landslides)
- Pipeline exposures potentially impacted by extreme weather

- Class 1 or 2 locations
- Pipelines and associated facilities impacted by storm surge

Extreme Weather Event or Natural Disaster Post Inspection Criteria:

- A typically rare or infrequent weather occurrence characterized by having unusual intensity
- Likelihood that scouring or movement of the soil surrounding the pipeline
- Movement of the pipeline
- Likelihood of damage to above ground assets or components that could impact the safe operations of the pipeline or facility

Weather events that meet these criteria:

Hurricanes

- Any CAT 1 or above hurricane that makes landfall and could impact TC Energy assets
- Potential impacts include damage to above ground facilities, exposed pipe, and above ground pipe and components due to wind damage and flying debris
- Flooding, landslides, tornadoes, or other weather events meeting the criteria in the section could also occur because of a hurricane. See criteria for those weather events for further guidance

Earthquakes

- Earthquakes of magnitude 5.0 or greater are considered potentially actionable
- Pipe Integrity Weather and Outside Forces (WOF) team will assess the severity of potential damage based on magnitude of reported earthquake, and minimum distance between the epicenter and the affected pipeline and facilities.
- Pipe integrity will initiate action in response to the earthquake and will communicate to regional operations for implementing inspections
- See Earthquake Response Procedure for Gas Pipelines (CAN-US) for more details

Tornadoes

- Any confirmed EF0 or larger tornado
- Potential impacts include damage to above ground facilities, exposed pipe, and above ground pipe and components due to wind damage and flying debris along the path of the tornado
- Inspections should occur along the tornado path

Wildfires

- Any wildfire that directly impacts an above ground facility, exposed pipe, or above ground pipe location

Volcanic Eruption

- Any volcanic eruption that impacts TC Energy pipelines or facilities

- A specific plan will be developed per volcanic eruption event

Landslides

- Any landslide related ground movement that is likely to impact a TC Energy pipeline or facility reported by a third party
- Landslides found through base line assessments or standard surveillance assessment processes do not meet the requirements of this section
- See Pipeline ROW Signage and Depth of Cover Procedure (US) (CD90000393) to find the process for documenting new landslides and other geotechnical features

Flooding

- A flash flood or major flood confirmed by the National Weather Service, a state agency, or other federal agency in the area of a TC Energy pipeline or facility
- Priority inspections are moderate and high hazard water crossings based on TC Energy's baseline hydrotechnical hazard assessment
- TC Energy assets impacted by Storm Surge – flooding caused by hurricanes or tropical storms

Hail

- A severe thunderstorm that produces hail ≥ 1.75 inches (golf ball size). According to the National Weather Service, hail 1.75" and above can cause moderate damage
- Inspections should include visual observation of above ground assets and components where hail has been reported

Wind

- Severe storms that generate windspeeds ≥ 74mph. This is based on the equivalency of winds experienced in a CAT1 hurricane.
- Inspection of above ground assets and components should occur due to possible damage from winds and/or flying debris

Documentation Requirements

All post-extreme weather or natural disaster inspections meeting the criteria identified in this section should be reported to the Pipeline Safety Compliance department. If inspections cannot commence within 72 hours due to the unavailability of personnel or equipment, contact the Pipeline Safety Compliance department so that the appropriate PHMSA Region Director can be notified.

Once it is identified that a 72hr post extreme weather or natural hazard inspection is required, the Area Manager or Field Technician will create an M1 notification in BlueWorx. A Field Work Planner (FWP) will then create a PM01 work order marked as regulatory required. The following standard naming convention should be used for this work order – "72-Hour Post Weather Insp-(Operational Area & Free text)". These PM01 work orders should be 45-day work orders, ensuring that the work order is completed on or prior to the calculated due date.

Once the work order is available, Operations will charge all time associated with the inspections and will attach documentation and pictures, as required. Aviation, if utilized, will also attach inspection

reports to this work order. Operations should document their inspections utilizing the standard Ground Based Patrol Report -ADHOC inspection in BlueWorx.

References:

Pipeline Ground Based Patrol – US Gas (US)

Ground Based Patrol Report (US)

TEP-IN-WOF-G Weather and Outside Forces Threat Management (US)

Pipeline ROW Signage and Depth of Cover Procedure (US)

Earthquake Response Procedure for Gas Pipelines (CAN-US)

5.6.2 Flood

Locations which are prone to flooding should identify those potential receptors in the applicable Emergency Response Reference documents.

Flooding
Preparedness Measures 1. Items to consider if Flooding is a concern: o Verify mobile pump operations o Test radio / satellite phone operations o Inventory sand bags and fill if needed. (Defiance Location Only) o Monitor local weather / news o Daily team meetings with affected crew until threat passes **Preventative Measures** 1. Field Operations should monitor local weather conditions to determine flood preparation requirements. 2. Determine if dikes would protect the facility or vulnerable pieces of equipment. o If dikes will not help, ensure the facility is isolated from the mainline, non-essential power has been shut off and the power gas (i.e. gas required to operate valves) is left on. 3. Raise vents on critical equipment, such as regulators, to an elevation higher than that expected of the floodwater. 4. Extinguish line heaters if operating conditions permit. 5. Do not remove liquid from atmospheric tanks; empty tanks are more likely to float and break piping connections or cause other damage. 6. Move hazardous materials (i.e. waste drums) to safe/secure storage locations. 7. Determine if normally aboveground facilities (valves, measurement and regulation, and relief valve setting, etc.) could become submerged and be struck by watercraft operating in flooded areas. o Mark such facilities with buoys as appropriate. 8. Disable line breaks or other automatic safety devices if necessary. 9. Protect critical equipment with fences or other temporary means. 10. Act (i.e. remove valve handles, lock valves) to ensure continued service and prevent possible damage to Company facilities. 11. Ensure regulatory required records are secure. (i.e. local operation equipment, manuals, DOT or OSHA files.) 12. Evacuate the facility if deemed appropriate. o Priority shall be given to higher impact areas based on:

Flooding

i. Life Safety.
ii. High Consequence Areas (HCA) status.
iii. Population density.
iv. Potential for human population (freeways, recreation areas, other roads).
v. Environmentally sensitive areas (rivers, wildlife refuges).

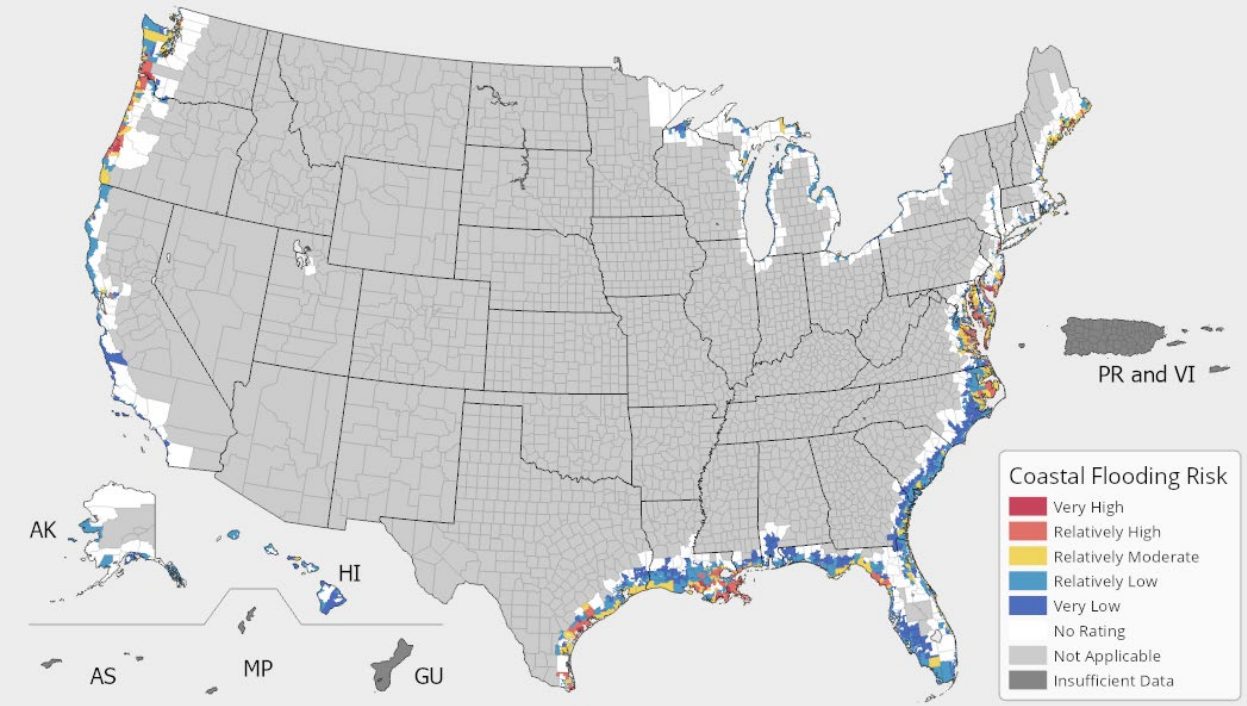
13. Inform the Control Center and Regional Director of the local actions taken.

During Flooding

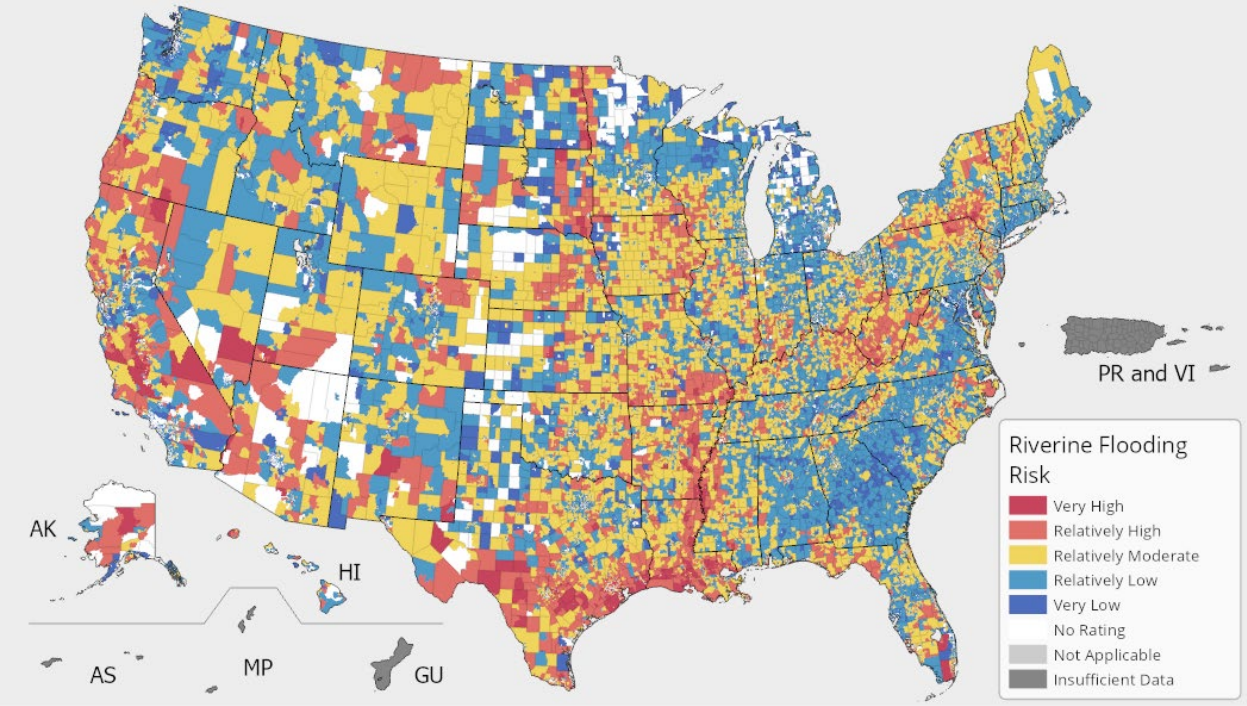
1. Activate the EOC if coordination support or other corporate support is required.
2. Initiate an appropriate pipeline patrol per Section 5.6.1.
3. Have personnel available for emergency response action such as shutdown, upstream/downstream isolation, and contamination.
4. Should gas be leaking at a 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).
5. Consider the effect on other customers on the same pipeline.
6. Coordinate with other pipeline companies in the flood area.
7. Coordinate with local emergency services in the flood area and, as appropriate:
   - Provide Operations personnel to emergency operations centers to act as liaison for pipeline issues.
   - Provide maps and information on location of pipeline facilities and conditions to emergency responders.
8. Use caution in flooded areas due to the risk of:
   - Electrocution
   - Swift-moving water and debris
   - Submerged surface debris and damage
   - Displaced wildlife
9. Notify the appropriate Gas Control Center of impacted Company assets.

After Flooding Subsides

1. Obtain necessary entry permits from local authorities.
2. 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.
3. See Section 5.6.1 to determine if an event requires a 72-hour inspection.
4. 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.
5. Ensure line markers and signage are still in place.
6. Evaluate damage to electric motors and the electrical and control systems before attempting to restart the facility.
7. Develop and execute repair plan.
8. Develop and execute return to service plan.
   - If necessary, purge lines prior to returning equipment to service.
   - Return line breaks or other automatic safety devices to service.
9. Notify the Control Center upon return to service.
10. Document any flood related activities (i.e. patrols, inspections, repairs or notifications).



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/coastal-flooding (Source Data: FEMA National Risk Index)



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/riverine-flooding (Source Data: FEMA National Risk Index)

5.6.3 Tornados / Thunderstorms

Tornado or Severe Thunderstorm

Preparedness Measures

1. For all attended facilities, Field Operations should identify the nearest designated storm shelter, either on site or in a nearby community.
2. Communicate identified storm shelters to potentially effected Field Operations personnel.

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:

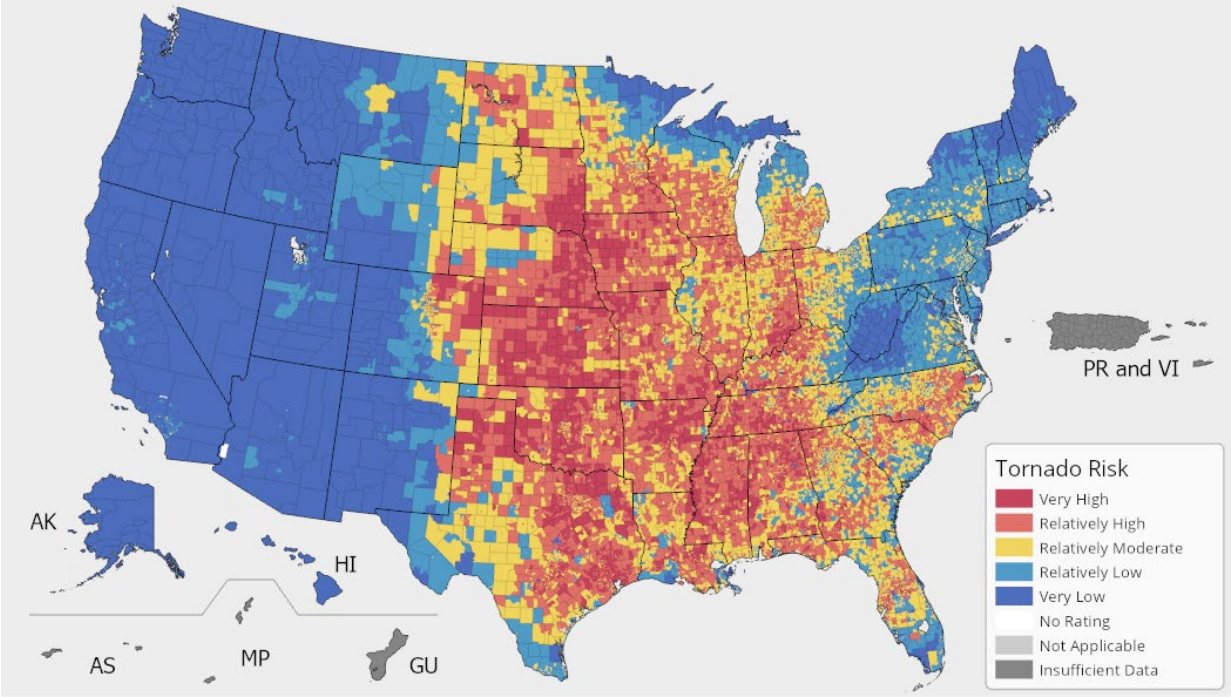
1. Ensure all personnel relocate to a safe location.
2. Notify the Monitoring Center/Gas Control and the Area/On-Call Manager if it becomes necessary to seek shelter.
   - Advise them the Team will be out of communication for a period of time but will re-establish communication once the hazard has gone.

In the event of an approaching tornado:

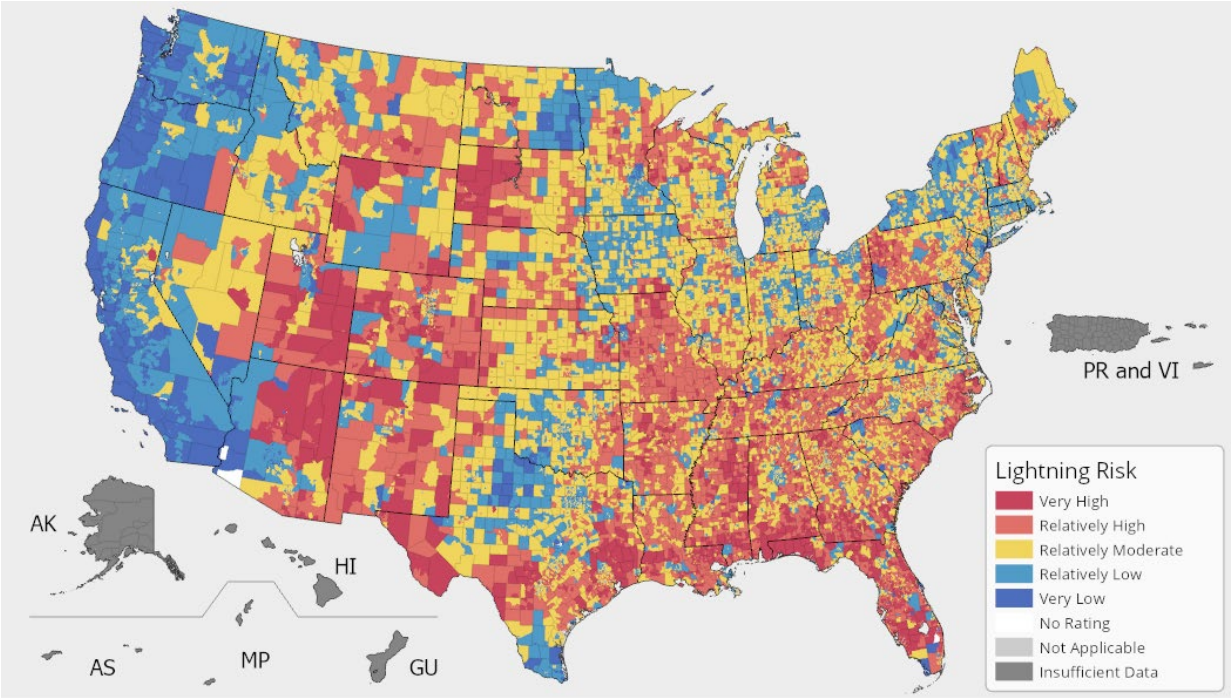
1. Never place yourself in danger to preserve company equipment.
2. Advise the Area/On-Call Manager that the EOC may be required.
3. Advise the Monitoring Center/Gas Control of pending tornado.
4. All personnel at the facility (if they have time and safe to do so) will seek shelter in a designated storm 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. If there are injuries or fatalities, refer to the Critical Injury and Fatality Response Procedure (CAN-US-MEX).
   - Notify Area/On-Call Manager, EOC 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. See Section 5.6.1 to determine if an event requires a 72-hour inspection.EOC
4. Field Operations will collaborate with Engineering to develop and execute a Repair Plan.
5. Develop and execute a return to service plan.



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/tornado (Source Data: FEMA National Risk Index)



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/lightning (Source Data: FEMA National Risk Index)

5.6.4 Wildfires & Forest Fires

Wildfires or Forest Fires

Preparedness Measures for Fire-Prone Areas

1. Communicate with fire authorities to share key contact information and communication expectations.
2. 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.
   - 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.
3. 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.
4. Pre-draft the appropriate information to complete a formal pipeline crossing agreement. Send required information to the Land Department.
5. At compressor stations, consider keeping extra filters and/or other maintenance items in stock that could become damaged during wildfires due to ash or smoke.

Preventative Measures

1. Ensure receipt of proximity alerts when fires are within 18 miles of a TC Energy facility.
   - Area Manager to review alert information, investigates accuracy and characteristics (winds, weather forecasts, threat potential, communicates with fire crews as needed), and communicates risk to Regional Manager
   - Continue surveillance of wildfire
   - Consider developing thresholds for evacuations and needs to isolate facility
     i. The decision to keep station pressurized or vent/relieve all gas is made by the Region in conjunction with the appropriate Control Center.
     ii. Historical events have shown the station suffers minimal damage from a forest fire due to environmental conditions such as station weed control, graveled yards and buffer areas between the station fence/facility and forest. The ambient heat is not to the degree of causing serious melting of equipment and pipe integrity issues.
     iii. Indications from the Field and Engineering suggest the movement of gas will keep the station cooler than allowing the gas and oil to remain stagnant and heat up in the pipes.
2. Isolate the pipeline facility or minimize the risk from fire by trenching, watering, removing combustibles in the area and/or other appropriate measures.
3. Regional leadership should consider if a EOC is required
4. 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;
   - Located within a secured area
   - 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.
5. Regional leadership should decide whether site isolation is required.

Wildfires or Forest Fires

- Decision should include consideration for any maintenance issues (valves out of service, maintenance activities) that could affect normal isolation procedures or hazards

6. The Control Center should determine what the system requirements are without the threatened/damaged facilities in service.
7. Site personnel and/or the EOC 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.
8. Monitor road closures that may hamper the movement of Company personnel into or out of the site.
9. If a fire is within 3.5 miles of a Company facility, PSC shall:
   - Evaluate reporting requirements for affected jurisdiction and make any required notifications to State or Federal agencies.

Considerations if a Facility is Isolated and Vented:

1. 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 EOC and/or Area Manager before venting a station in proximity to a fire.
2. 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 or 815 yards of a compressor station.
   - 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.
   - Local Emergency Services must be notified if venting of station occurs near a roadway.
   - When venting is complete, ensure you call the appropriate authorities you have completed your venting.
3. Keeping gas flowing may keep the pipeline cooler; Gas Control and Field Operations must collaboratively weigh the risks of isolating/venting a station in proximately to a fire.

Considerations if an Evacuation from the site is required:

1. Consider isolating facilities from the pipeline; review the station operations for compressor and mainline to determine the safest means to protect both the station and the mainline.
2. All gas venting must be done safely and review the process with consideration for weather conditions at the time of the fire.

   Note: Keeping gas flowing may keep the pipeline cooler; Gas Control and Field Operations must collaboratively weigh the risks of isolating a station in proximately to a fire.

   Note: Heat may affect the site electronics and SCADA equipment causing the Control Centre to lose communication or control over the facility.

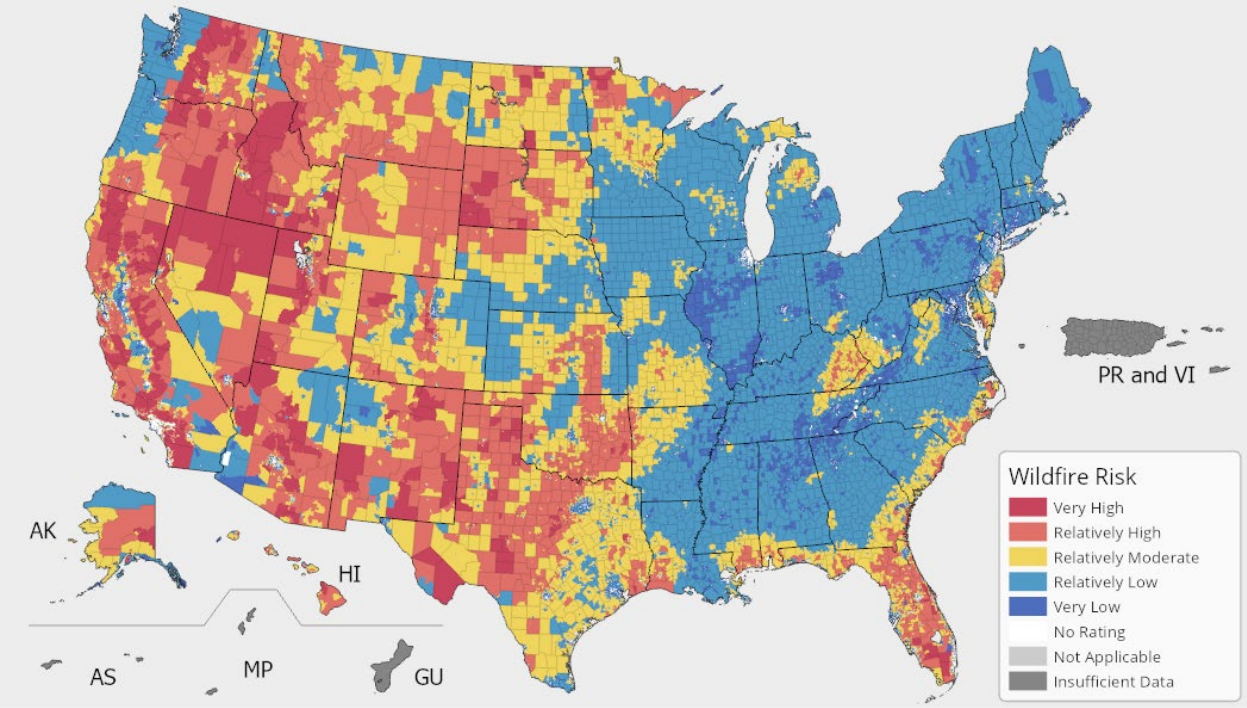
   Note: A shut-in of the producer could occur which would result in unplanned flaring by the producer during the fire storm. Customers and producers will be made aware of this possibility, so they can determine their course of action if this were to occur.

   Note: 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.
3. Any decision to shut in the facility will be made collaboratively between Gas Control and Field Operations. If this is done, Gas Control shall notify the customer prior to the shut in.
4. Inform the Monitoring Center/Gas Control and the EOC of personnel evacuation routes and final destination.
5. Notify the Monitoring Center/Gas Control and the EOC to confirm arrival at your destination.

Fire authorities may request to use the ROW as a fire line or to cross the ROW with heavy equipment.

1. When working with local authorities on creating fire breaks:

Wildfires or Forest Fires
○ Notify Monitoring Center/Gas Control and Area Management. **After a Fire** 1. 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. 2. See Section 5.6.1 to determine if an event requires a 72-hour inspection. 3. If damage is found, Engineering will be contacted to conduct an investigation into the integrity of the equipment/facility. 4. A comprehensive pressurizing plan should be developed before operations are restored. 5. Document all patrols, inspection or repairs in the Company's work management system. 6. Make appropriate repairs. 7. Work with Gas Control to develop and execute a Return to Service Plan.

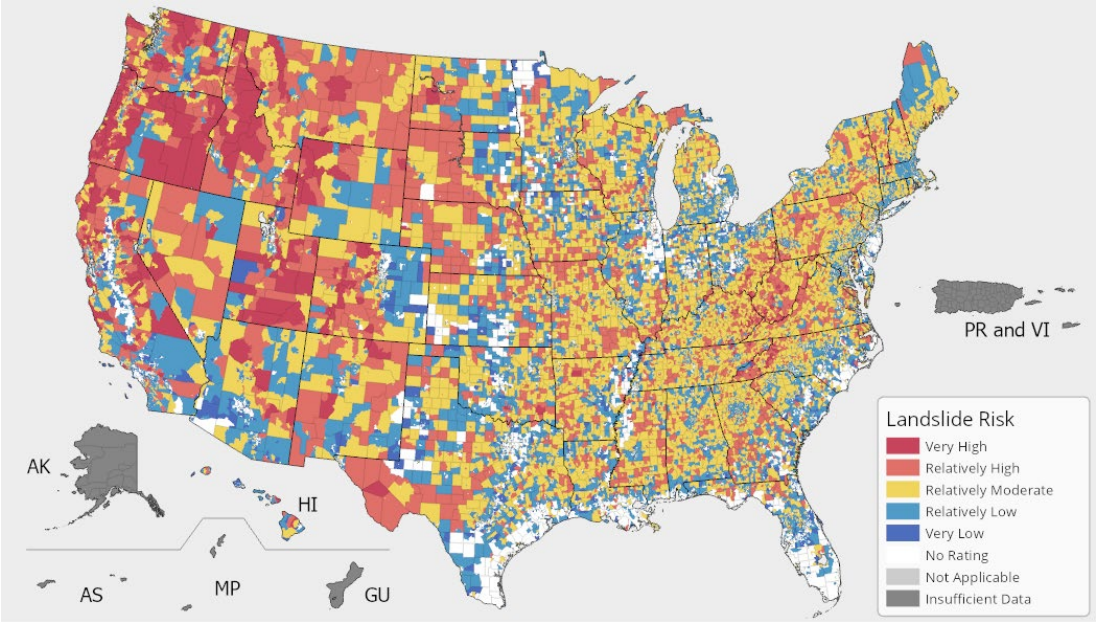


This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/wildfire (Source Data: FEMA National Risk Index)

5.6.5 Landslide & Rockslide

Landslide
Preventative Measures 1. Field Operations to protect facilities to the extent possible by erecting barriers. 2. 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.

Landslide
3. Gas Control is to establish alternate means to supply customers (either temporarily or permanently) as required. 4. Conduct Pipelines Patrol and Leakage Inspections for known slip areas on the right-of-way or slips adjacent to the right-of-way (that may affect the right-of-way). After a Landslide or Rockslide 1. See Section 5.6.1 to determine if an event requires a 72-hour inspection. 2. When a landslide occurs over a buried pipeline, Field Operations and Engineering should collaborate to develop and execute a plan to remove material from over the ROW. Consider relieving stress on the pipeline where soil support has been removed. 3. If a pipeline facility is covered by a landslide, consider shutting off the supply to that facility before attempting to uncover. Field Operations should collaborate with the Monitoring Center/Gas Control to coordinate shutting off gas to the affected pipeline. 4. Document all patrols, inspection or repairs in the Company's work management system. 5. Field Operations will work with Engineering to develop and execute a Repair Plan. 6. Field Operations will work with Gas Control to develop and execute a Return to Service Plan.

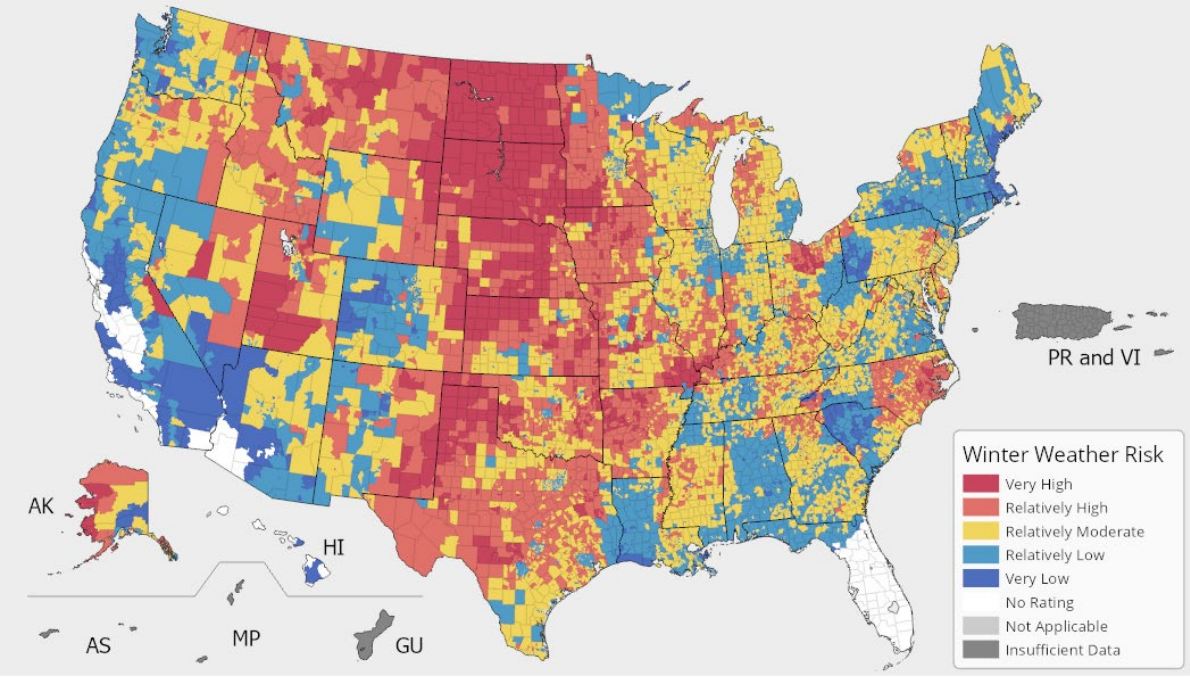


This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/landslide (Source Data: FEMA National Risk Index)

5.6.6 Ice Storms & Blizzards

Ice Storms or 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.

Ice Storms or Blizzards
2. Employees that are working at critical company facilities should be prepared to stay on location by doing the following items: ○ Take a supply of emergency food and water to site (canned goods and dry goods) ○ Keep cots and 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. Monitor 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.



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/winter-weather (Source Data: FEMA National Risk Index)

5.6.7 Earthquakes

Earthquakes
Preventative Measures 1. Identify safe places to be used during an earthquake. ○ Safe Places: Under heavy tables or desks, interior hallways, corners of rooms or strong archways. ○ Dangerous Places: Near windows, under heavy objects that can fall, near high pressure lines and vessels. 2. Ensure First Aid Kits are stocked with the appropriate supplies and are readily accessible.

Earthquakes

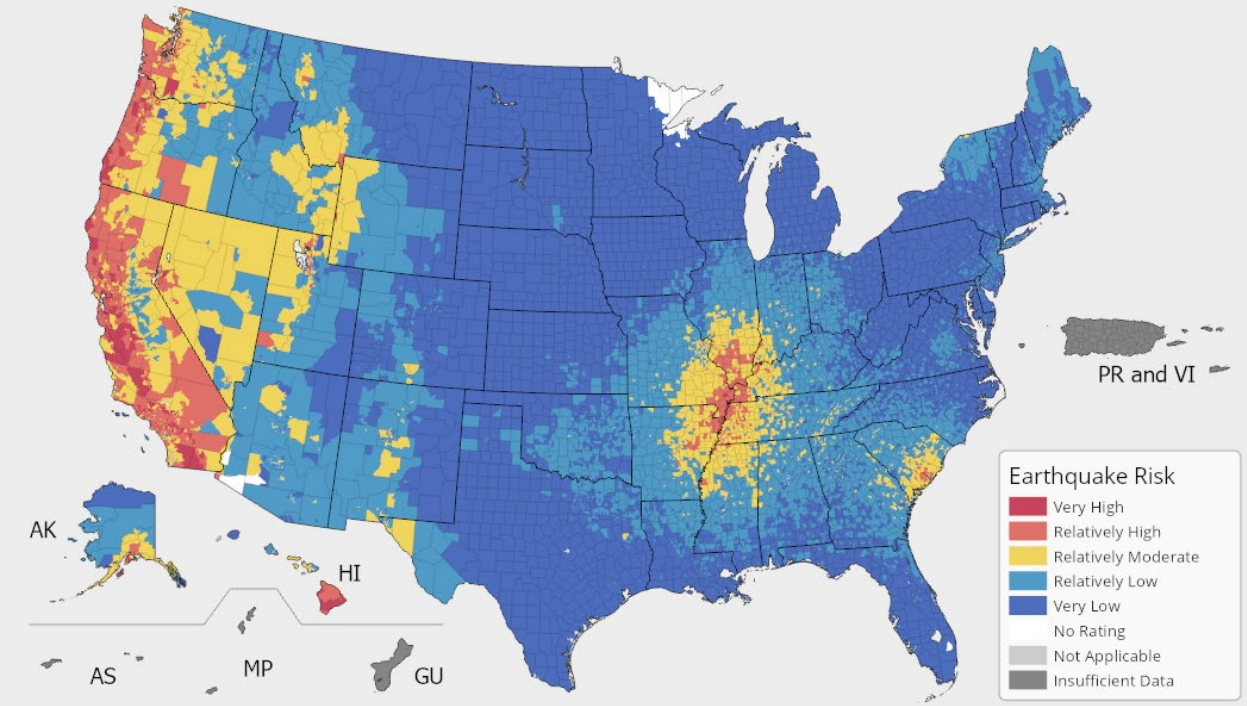
- Keep non-perishable food supply and water at sites.
- Keep cots and sleeping bags at sites.

During an Earthquake

1. If indoors:
   - Stay indoors.
   - Take cover in a safe place.
   - Protect your head and face.
2. If outdoors:
   - Stay outdoors.
   - Move to a safe place away from windows, buildings, pressurized pipelines, and overhead wires.
3. If in a vehicle:
   - Try to pull over to the edge of the road where it is safe.
   - Do not block traffic.
   - Stay away from bridges, overpasses, and buildings if possible.
   - Stay in your vehicle.
4. If in a crowded public place:
   - Take cover.
   - If you are inside, stay inside.
   - If you are in a shopping center, take cover in the nearest store.
   - Stay away from windows, skylights and heavy display shelves.
5. Notify the Control Center and Area or On-Call Manager if an earthquake is detected in your location.
   - Validate information with local Field Operations personnel.
   - Area Manager should notify Regional Director.
6. Do not trip ESD system. Leave facilities in operation.

After an Earthquake is Over

1. Check yourself and others for injuries and administer First Aid as necessary. If there are injuries or fatalities, refer to the Critical Injury and Fatality Response Procedure (CAN-US-MEX).
2. If you are at the facility and it has not shut down, isolate the facility from the mainline, preparing for aftershocks.
3. Activate the EOC by contacting the Area Manager, Regional Manager, or Emergency Response On-Call Representative.
4. Contact the EOC and the Control Centre and report the extent of damage.
5. All effected Operations staff should notify the EOC Manager or the Control Center of their status.
6. Initiate a pipeline patrol by the most expedient means possible. Priority shall be given to higher impact areas based on:
   - High Consequence Areas (HCA) status.
   - Population density.
   - Potential for human population (freeways, recreation areas, other roads).
   - Environmentally sensitive areas (rivers, wildlife refuges).
7. Obtain any necessary entry permits from local authorities.
8. Determine alternate routes to impacted Company locations.
9. See Section 5.6.1 to determine if an event requires a 72-hour inspection.
10. Develop and execute a return-to-service plan.
    - Notify Control Center when asset is returned to service.



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/earthquake (Source Data: FEMA National Risk Index)

5.6.8 Hurricanes

Hurricanes
Preparedness Measures 1. Before hurricane season begins, the Emergency Management Team should review and share the USNG Hurricane Procedure with pertinent leaders in Field Operations. 2. Field Operations should review the USNG Hurricane Procedure and ensure contact lists are up-to-date. Note: Hurricane season in the Atlantic begins June 1st and ends November 30th. The East Pacific hurricane season begins May 15th and ends November 30th. **Phase 1: Throughout Hurricane Season for all USNG Assets with potential to be impacted by a Hurricane** 1. Secure all loose items (drums, bottles, materials, fire extinguishers boxes and covers, pigs, etc.). 2. Store small loose items inside buildings. 3. Inspect security measures on building doors. 4. Test run generators and assess fuel capacity to ensure adequate fuel is available for generators and vehicles. (Maintenance Plans should trigger at beginning of Hurricane Season to ensure this work is complete.) 5. Keep extra water, food and other emergency supplies on hand. 6. Create baseline list for valve positions in potentially effected Areas. 7. Area Manager to report to Regional Manager to confirm Phase 1 is enacted.

Hurricanes

8. Communicate with Emergency Management team to confirm ongoing monitoring of Hurricane/Tropical Depression status.

PHASE 2: Storm is on path for USNG assets and projected impact less than 5 days.

1. Monitor Hurricane status.
2. Notify the following groups that Field Operations has entered Phase 2 of Hurricane Preparedness:
   - Monitoring Center/Gas Control Center
     Gas Control/Monitoring Center should identify and notify potentially impacted customers and industry partners.
   - Area Manager
   - Regional Manager
   - Regional Director
     Regional Director should appoint one person to prepare to be the EOC Manager if the EOC is activated in coming days.
     EOC Manager shall include Supply Chain and US Gas Field Operations Business Continuity Lead in all EOC Communications.
   - Emergency Preparedness Coordinator Regulatory Compliance Specialist
3. Procure hotel rooms outside of forecast impact for Essential Personnel (i.e. Company leaders).
   - This hotel could be used as a 'back-up' location or off-site Company Incident Command Post to meet and strategize on the Company's response to the event
   - Consider procuring hotel rooms outside of forecast impact area as needed for evacuating/impacted employees.
4. Collect garbage and debris, empty garbage receptacles, and dispose of garbage off-site.
5. Secure any loose materials or items in the yard.
6. Inspect and secure drums in covered storage areas.
7. Consult with Construction Services and Project Leaders (if they're doing work on-site) to determine when to stop construction and/or projects involving contractors; Operations Regional Director has final authority in this decision.
8. Prepare an area in warehouses (if available) to park vehicles.
9. Host routine (daily or multiple per day) situation/status calls for Field Operations by Area to ensure all potentially effected staff are aware of storm status and required preparedness activities.
10. Notify the following groups that Field Operations has completed Phase 2 of Hurricane Preparedness:
    - Monitoring Center/Gas Control Center
    - Area Manager
    - Regional Director

PHASE 3: Storm is tracking towards USNG asset(s) and is projected to make impact in less than 3 days.

1. Continue to track storm status and forecast.
2. Notify the following groups that Field Operations has entered Phase 3 of Hurricane Preparedness and is planning to evacuate the site:
   - Monitoring Center/Gas Control Center
   - Area Manager
   - Regional Manager
   - Regional Director
   - EOC Manager (designated by Regional Director)
   - Emergency Preparedness Coordinator

Hurricanes

- Regulatory Compliance Specialist

3. Notify impacted customers/industry partners.
4. Make ready Compressor Stations, Meter Stations, Valve Yards, and Tap Sites.
   - If mandatory evacuation is issued, Compressor Stations should be shut-in.
5. Secure other facilities including Offices and Warehouses.
6. Consider the status/setting of auxiliary generators.
   - Set auxiliary generators in automatic mode or set to no-start/off mode if all personnel are evacuating.
7. Install storm window covers (if equipped).
8. Lower all light poles and secure (if all lights on-site are retractable).
9. Prepare laptops to evacuate with personnel.
10. Relocate DOT and Environmental Files and prepare to evacuate files with personnel.
11. Relocate mobile equipment (i.e. tractors and vehicles) to higher ground.
12. Document the evacuation plans of Company employees. The following items should be recorded by the BU or EOC:
    - Effected employees' names
    - Primary and alternate contact information for effected employees
    - Planned evacuation route (shall align with directions given by emergency services)
    - Destination address and expected time of arrival.
13. Schedule routine (daily or multiple per day) accountability calls for Field Operations by Area. All staff should call in daily to confirm they are safe and request any support required.
14. Notify the following that Phase 3 is complete and evacuations are occurring as required.
    - Monitoring Center/Gas Control Center
    - Area Manager
    - Regional Manager
    - Regional Director
    - EOC Manager (designated by Regional Manager)
    - Establish virtual EOC
    - Emergency Preparedness Coordinator
    - Regulatory Compliance Specialist

PHASE 4: Storm has made landfall or is impacting USNG asset(s).

Assumption: All Company Personnel have evacuated or are otherwise safe; if this is not true, take all action to ensure the safety of people first.

Note: Primary communication method is cellular telephone calls. Sometimes, if cellular calls are not available, and text continues to work, use it. Alternatively, Satellite phones can be used.

1. Continue to track storm status and forecast.
2. Maintain routine (daily or multiple per day) accountability calls for Field Operations by Area. All staff should call-in daily to confirm they are safe and request any support required.
   - Log all calls received from employees, noting their name, time of call, location, room and confirm telephone number where they can be contacted.
3. Ensure Gas Control continues to remotely monitor the pipeline pressure where possible.
   - Gas Control will notify Field Operations of any anomalies.
4. If Field Operations personnel receive a call from other operators, inform Gas Control/Monitoring Center of the information received. Gas Control should maintain operations status/impacts for industry partners.
5. Essential Personnel shall meet at a designated off-site location (i.e. hotel, off-site Company Incident Command Post) to monitor and strategize on the Company's response to the event.

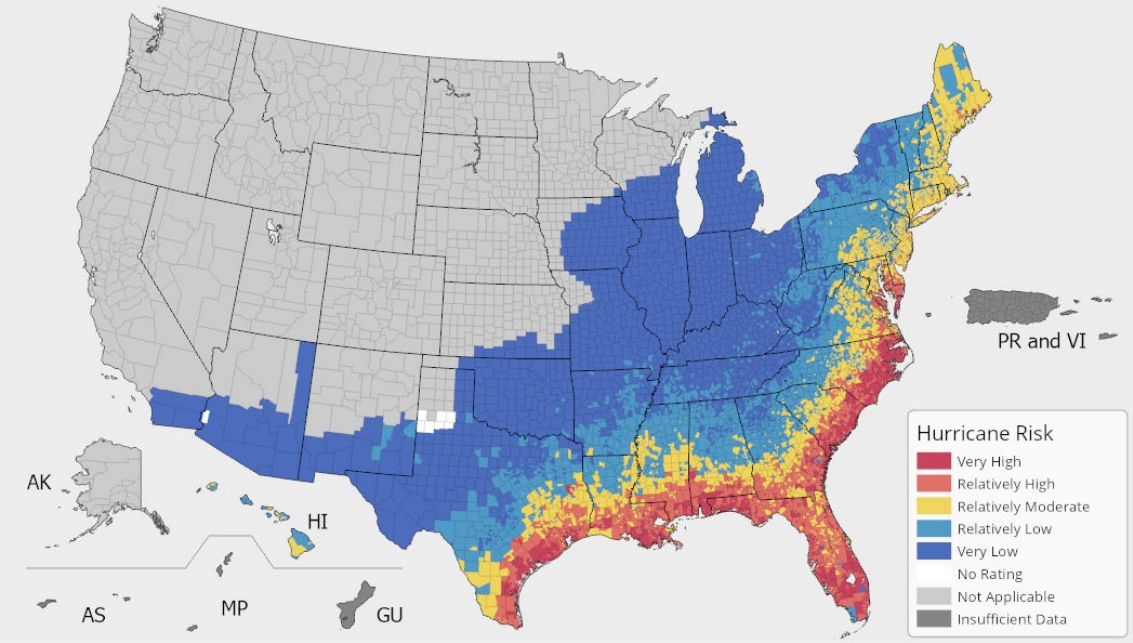
Hurricanes

6. Production shall not resume until all facilities have been inspected for damage and verified that system is safe for operation. Inspection results will be communicated to Area Manager and Gas Control.

PHASE 5: Storm has dissipated and is no longer directly affecting USNG asset(s); flooding and damage may still be occurring.

1. Continue to track storm status and forecast.
2. Maintain routine (daily or multiple per day) accountability calls for Field Operations by Area. Employees can be relieved from calls if they have power at their homes, have returned to their homes, and can return to work.
3. For employees with long term impacts, after accountability calls have been discontinued, Area Manager should work with Human Resources to ensure employees are properly supported.
4. Monitor emergency services announcements to determine when Company personnel can make re-entry into evacuated/effected zones.
   - Employees should have reentry authorization (i.e. reentry letter) and/or company badges with them.
   - Develop a Site Safety Plan prior to re-entry and develop JSAs before commencing inspection and site evaluation.
5. Establish Company Incident Command Post at a Company facility near the impacted area but without impeding emergency services operations.
6. If the Incident Command System (ICS) is not yet being used to manage the Company's response, it should be initiated at this time.
7. If an Incident Commander has not yet been identified, the Regional Manager should assume the role of Incident Commander (as well as EOC Manager) or appoint a Company Incident Commander.
8. If widespread area facility damage is reported, coordinate Aviation for over flight of key facilities in path of the storm.
9. If facilities and employee homes are damaged to the extent that they are unusable, temporary housing, offices, power and supplies should be procured and established on-site or as close as practicable.
10. Contract employees or vendors should be utilized in this effort to free Company employees to deal with Company assets.
11. Follow all local ordinances and environmental guidelines for all temporary equipment. Engage Environmental Services to determine regulatory impacts.
12. Determine required Field Operations staffing and hours of operation in impacted area; communicate staffing plan to Monitoring Center/Gas Control and EOC if active.
13. A comprehensive inspection plan shall be developed and executed within 72 hours of when the area can be safety accessed by personnel and equipment if the personnel and equipment required to perform the inspection are available
    - Inspect facilities for damage and/or ability to operate safely.
    - Respond to ruptures, fires or spills which are active in accordance with company emergency response guidelines.
    - If unable to commence the inspection due to unavailability of personnel or equipment, notify the appropriate PHMSA Region Directors as soon as practicable.
14. Arrange for and initiate repairs.
    - All damages recorded during the comprehensive inspection should be compiled into a storm-specific hurricane recovery project (PM01)
15. All inspections will be documented using the Hurricane Damage Assessment Form or other traceable records (i.e. email, text message).

Hurricanes
16. Gather pictures/video of damage where possible. 17. Priority of Site Inspections are: ○ Compressor Stations ○ Main Line Valves (MLVs)/Valve Settings (VSs) ○ Communications Sites (i.e. SCADA sites, communications towers, third-party communications services, repeaters) ○ Large Volume Meter Stations ○ Small Volume Meter Stations 18. Collaborate with Technical Services to discuss and prioritize repairs if needed or discovered integrity issues. 19. Return pipelines and equipment that is serviceable to operation. 20. Gas Control shall establish contact with customers to ascertain their ability to flow and get preliminary damage information. This information should be forwarded to Area Manager. 21. All employees should keep logs of instructions, times, events, reports, phone conversations, etc. for proper record keeping.



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/hurricane (Source Data: FEMA National Risk Index)

5.6.9 Volcanos

Volcanic Eruption
Preparedness Measures 1. Have spare vehicle air filters on hand. **During Volcanic Eruption** Instructions for Field Employees:

Volcanic Eruption

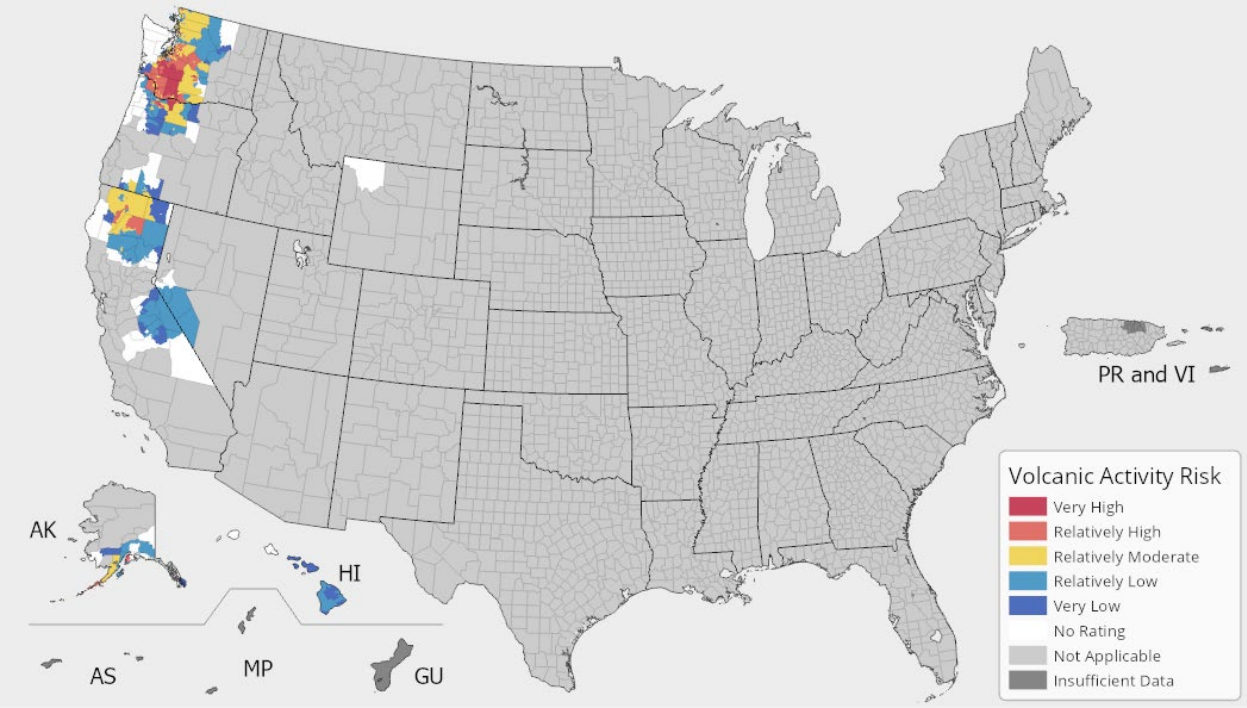
1. Consider recalling crews to the maintenance base or their homes prior to the expected arrival of the ash cloud while it is still clear to travel.
2. If a crew is at a station when an ash fall begins, consider remaining there for the duration. Do not travel until it is safe.
3. Use appropriate PPE (i.e. full-face air purifying respirator) to protect eyes and breathing of ash.
4. Units should not be operated during an ash fall so they do not ingest abrasive material and sustain major internal damage.
    - If operating personnel are at a station and ash fall begins with no warning, they have the authority and responsibility to shutdown the units and secure the station without supervisor's direction.
5. All units in the anticipated path of the ash cloud should be shutdown and locked out prior to its arrival if possible. This may be done locally or remotely, depending on the circumstances.
6. Units should not be started remotely until after a crew can safely be dispatched to the station to verify that the unit air filters and inlet areas are clear and clean.
7. After an ash fall, be alert for winds, which may stir up the ash and again pose a hazard to the air intakes of engines or turbines.

Instructions for EOC:

1. As soon as news of an eruption breaks, begin gathering information from news media, field personnel, etc. to assess any ash cloud size, location, heading and speed.
2. Activate the EOC.
3. Track the status of all affected Operations personnel.
4. Ensure the Control Center is provided with all details relating to the event.
5. Consider recalling crews to the maintenance base or their homes prior to the expected arrival of the ash cloud while it is still clear to travel.
6. Consider releasing nonessential crewmembers and office personnel to go home while it is still safe to drive.
7. Advise Corporate Aviation of the situation and initiate a pipeline patrol in the affected area as soon as possible.

After the Eruption Subsides

1. Be alert for:
    - Winds, which may stir up the ash and again pose a hazard to the air intakes of engines or turbines.
    - Flash flooding, which may occur due to rapid snow melt and could cause water contamination.
2. See Section 5.6.1 to determine if an event requires a 72-hour inspection.
3. If damage is found, contact Technical Services to conduct a further investigation into the integrity of the equipment/facility.
4. Develop and execute a repair plan.
5. Develop and execute a return to service plan.
6. Notify the Control Center upon return to service.



This map is for reference only; for current information access the source data at https://hazards.fema.gov/nri/volcanic-activity (Source Data: FEMA National Risk Index)

5.7 Security Incidents

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

- Security Threats Process (CD90000100)
- Bomb and Sabotage Threat Response Process (CD90000123)
- CSO PRO Cybersecurity Incident Response Process (63019520)

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

Security Threats
1. Conduct normal operations (baseline threat level activities). 2. Identify and report security threats. 3. Assess the security threat and determine appropriate action. 4. Notify TC Energy stakeholders and any affected external parties. 5. Respond to security threat(s), in accordance with the specified threat level.

Bomb and Sabotage Threat
1. Receive the threat and initiate response. Consider threats received by telephone, mail, and/or e-mail, Text, Social Media, or Other Electronic Means.

Bomb and Sabotage Threat
2. Report the threat to law enforcement, facility management, building security, and all internal stakeholders. Then, record the event into the SAP Incident and Issue System. 3. Assess the threat and determine appropriate response plan. 4. Complete notifications to affected parties and agencies. 5. Execute the response plan. 6. If a suspicious package or device is found, take steps to report it and protect personnel. 7. If there is a bomb explosion, initiate emergency response.

Cybersecurity Incident
1. Report suspicious cyber activities to the Cybersecurity Office by calling the Service Desk immediately (24 hours per day, 7 days per week) at 1-888-546-3484. 2. Work collaboratively with the Cybersecurity Office is to sustain or repair safe, secure and resilient digital assets. 3. Cybersecurity Office implements the Cybersecurity Incident Response Process.

5.8 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. Immediately call 911 or other first responders. If trained and willing, render first aid and make the affected person as comfortable as possible until emergency medical help arrives.

Medical Emergency
• Do not move the injured or ill person unless the person is in danger of further injury or illness. • Make the injured or ill person comfortable and have someone stay with them. • Call 911.   ○ Provide the dispatcher with your name, specific location, call-back number, the nature of the emergency. • Contact the Team Leader or Area Manager. • If an Automatic External Defibrillator (AED) is in the building, use the AED in the event of sudden cardiac arrest. • Refer to the Critical Injury and Fatality Response Procedure (CAN-US-MEX).

5.9 Serious Injuries and Fatalities

The Critical Injury and Fatality Response Procedures has been developed by Human Resources to guide Leaders in managing issues related to the critical injury or fatality of an employee or contractor while engaged in work at TC Energy. It provides a detailed description of roles and responsibilities to respond to serious injuries and fatalities.

NOTE: If unsure if an injury is serious or critical (life-threatening) in nature, it shall be treated as critical.

Serious Injuries and Fatalities

KEY INITIAL ACTIONS (Employee/CWC incident):

- Dispatch any nearby TCE employee not directly involved in the incident to the scene as company liaison/information link ('eyes & ears on-scene.')
  - Replace later as/if needed (e.g. with manager.)
  - Confirm when they are on-scene and begin regular communication cycle (to EOC/ICS FUNCTION ROLES).
  - Where feasible they should confirm the identification of the person(s) involved.
- Ensure the Vice-President of Operations for that line of business has been notified – for the purpose of activating their Incident Support Team (IST).
  - If VP is not available, their directors may activate the IST.
  - Activation of the IST is mandatory for these incidents.
- The EOC and/or ICS FUNCTION ROLES is responsible for supporting any site response needs not addressed by the emergency response agencies, and to support TCE's on-site liaison and affected personnel/contractors on-scene.
- The Incident Support Team (IST) is responsible to lead the HR, Legal, Regulatory, investigation and Communication elements of the incident. The IST members will:
  - Begin regulatory notifications (Regulatory Compliance & Legal Regulatory Advisor.)
  - Begin family notifications (Led by Human Resources; process may vary by country.)
  - Initiate investigation (Form on-site investigation team; work with local authorities.)
  - Communicate internally and externally (Led by External Relations – Communications.)

KEY INITIAL ACTIONS (Prime Contractor/Sub-Contractor incident):

- Where TCE is Prime, dispatch any nearby employee not directly involved in the incident to the scene as independent company liaison/information link ('eyes & ears on-scene.')
  - Where TCE is not Prime, this action is discretionary, and the Prime Contractor should be consulted. While in TCE's interest this action must be approached sensitively.
  - Replace later as/if needed (e.g. with manager.)
  - Confirm when they are on-scene and begin regular communication cycle (to EOC/ICS FUNCTION ROLES).
  - Where feasible they should confirm the identification of the person(s) involved.
- Where TCE is NOT Prime, dispatching a representative is discretionary and the Prime Contractor should be consulted with sensitivity.
  - It is in TCE's interest to have first-hand information and a TCE representative should be dispatched toward the incident scene as a liaison. Whether they are to arrive on-scene should depend on whether the Prime or their sub-contractor are communicating well with TCE and their response actions appear to be appropriate.
- A Prime Contractor holds primary responsibility for emergency response on their worksite. Where TCE is not Prime, TCE shall establish contact with the Prime (ideally through their primary TCE point-of-contact, unless delayed) to:
  - Offer support, guidance and emergency response assistance as required
  - Assess the suitability of the Prime's activities, and where inadequate raise to the IST Leader's attention. (Activities include emergency response; support to impacted personnel; agency/next-of-kin liaison; safety investigation; media relations; reputation management.)
  - Connect & link TCE's on-site liaison ('eyes & ears' on-scene) with the Prime's on-scene representative and/or that of the Sub-contractor.

Serious Injuries and Fatalities		
WHO is injured/killed ->	**Contractor**	**Sub-Contractor**
SERIOUS INJURY/DEATH WHERE TCE IS PRIME CONTRACTOR	N/A	Liaise with sub-contractor through their regular TCE point-of-contact (POC) if available. Include the POC or Sub-Contractor Leader in IST calls when/if appropriate.
WHERE TCE IS NOT PRIME	Establish liaison with Prime Contractor through TCE point-of-contact.	Liaison must be through (or at least include) Prime Contractor - unless response inadequate.

- Continue to monitor the contractor's level of on-site emergency response competency and incident leadership effectiveness during the response and recovery. TC Energy may wish to offer or encourage the acceptance of advice or guidance; assume response leadership; or lead the reputation management element in TCE's corporate interest.

Notification of Next-of-Kin (NOK)

When an employee, contractor or member of the public is seriously injured, missing, or pronounced dead, next-of-kin notification must occur promptly and in accordance with Human Resources processes.

- Ensure the IST Leader is informed and has engaged Human Resources. They determine the next steps.
- Names of affected persons are to be protected and only disclosed on a need-to-know basis until next-of-kin are notified.
- Avoid email/text communication and hold conversations in private, preferably using a land-line telephone.
- HR requires identify confirmation before employee/contractor NOK information is accessed.
- Notifications are only made in-person. Where possible two company representatives (e.g. HR and Area Manager) will attend with local law enforcement.

Responsibility for Notification:

Employee /CWC	Notification of an employee's next of kin is the responsibility of law enforcement officers (i.e. police or sheriff.)
Contractors	Notifications regarding contractors should be made by local law enforcement together with the Prime Contractor. The Incident Commander will ensure that the contractor's management is notified. Some independent contractors may not have a head office.
Public	If a member of the public is injured or killed because of TC Energy activities, notifications will be coordinated with local law enforcement officers.

5.10 Facility Evacuation

Evacuation of Company personnel is often an effective and appropriate response action.

Site specific evacuation information (including egress routes and muster points) is included in the Site-Specific Orientation.

When an evacuation occurs, the following actions must also be taken:

- Account for all personnel on site. This is accomplished through head counts, sign-in sheets, communication with supervisors and other means.
- If the integrity of the facility is compromised, use the Emergency Shut-Down (ESD) or otherwise isolate the facility.
- Notify the Monitoring Center/Gas Control Center of the evacuation.
- Notify the Area Manager of the evacuation.

If a facility evacuation is required, no employees shall remain on the site. All personnel must evacuate and await the arrival of emergency services before returning to the facility.

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, TC Energy has prepared Guidelines for Note Taking, Communications and other Records Produced During an Emergency (004825243) to assist all Company personnel with understanding the importance, concern, and legalities of proper record production.

5.12 Post Emergency Response Actions

5.12.1 Return to Service

While outside pressures may rush 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 returning 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, should be reviewed as necessary.

5.12.2 Investigation

The hazard, impact, and severity of an emergency should be considered when determining the complexity of investigation. All incidents and near hits should be investigated in accordance with the Incident Management Standard (CD90000698) and TEP-IN-FAIL-GL Pipeline Failure Field Investigation (006162270). Such investigations, post-emergency, must include emergency communications, emergency procedure manuals and specifications, and all factors that may have impacted the release volume and the consequences of the emergency.

If the Response Organization is activated, debriefings shall be conducted in accordance with Section 8.4 of this Plan.

6. RESPONSE RESOURCES

Resource management is a foundational element of proper incident management. TC Energy has a varied network of resources for ensuring the availability of personnel, equipment, tools, and materials as needed at the scene of an emergency. It is important to become familiar with these resources prior to an emergency to ensure proper contracts and contacts are in place to expedite the availability of a required tool, piece of equipment, or technical expertise.

6.1 Contracted

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 in accordance with the Emergency Purchase Order (PO) Procedure (81461587).

Contracted resources that may be required when responding to an emergency may include:

- Environmental Service Contractors
- Heavy equipment operators
- Incident Management Teams
- Tools, Equipment, Materials Suppliers
- Specialized on-water/underwater emergency response resources for response to emergencies on submerged pipe (i.e. ELXP)

The following equipment may be used in responding to an emergency or for restoring facilities to service, and these types of equipment are often procured through contracted sources:

- Air compressor, backhoe, bulldozer, crane, low drag or equipment trailer, Mueller and/or stopple equipment, pole trailer, side boom, truck with fifth wheel, truck with "A" frame, welding equipment, and side booms.

UNGS maintains an Equipment, Materials and Contractors (65697039) listing to expedite access to these resources.

6.2 Company Owned Equipment

The Company maintains sufficient quantities of equipment for most emergencies. This section describes the tools, pipe, valves, fittings, clamps, communications equipment, etc. to respond which the Company owns and maintains and can be used to during emergency response.

6.2.1 Tools

Field Operations is responsible for providing the tools and equipment required to respond to an emergency. Construction Services typically procures the tools and equipment required to repair an asset after the emergency phase is over. Field Operations and Construction Services work collaboratively to arrange the most suitable outside resources throughout a response, as required. Operations will also arrange for outside resources, contractor tools, and contract equipment as required.

The following tools may be used in responding to an emergency or for restoring facilities to service:

- Air movers with valves, gauges, rubber donuts, “C” clamps, high pressure air hoses, beveling machines, bonding cable(s), binders, burlap bags, brass (spark proof) hammer, canvasses, chains, electrical extension cords, fire extinguishers, first-aid and burn kits, flares, flashers, flashlights and extra batteries, flood lights, gas detectors, grinders, line-up clamps. line locators, pavement breaker, Personal Protection Equipment (Eye, Ear & Head), personal rain gear, pipe cutters, pipe slings, pipe wrenches, picks, shovels, portable electric generator, portable radios, pressure gauges, rasps or coarse files, respiratory equipment, ventilation equipment, rope, socket sets, and water pump with hoses.

6.2.2 Communications Equipment

Cellular Telephones

Cellular telephone is the primary means for person-to-person communication during an emergency. Company issued cell phones enable response personnel to communicate by voice call, text message, and email; all these means of communication are used during emergency response.

In some emergency events, especially hurricanes, telecommunications systems can be overwhelmed when infrastructure is damaged and usage is high. To protect the Company’s ability to communicate by landline and cellular telephone, some Company employees are enrolled in the Government Emergency Telecommunications Service (GETS) and/or Wireless Priority Service (WPS) programs. These programs provide essential personnel priority access and prioritized processing in the wireless, local and long-distance networks, greatly increasing the probability of call completion. GETS and WPS are intended to be used in an emergency or crisis when the network is congested and the probability of completing a normal call is reduced. Satellite telephones may be used.

Consideration for GETS and WPS enrollment is given to Directors, Area Managers, and Team Leaders with operations in areas most vulnerable to hurricanes because these locations and events are most susceptible to overwhelmed telecommunications network issues.

Landline Telephone

When cellular networks are not operational, or employees are working from an established Company office location, Company paid landline telephone networks are also relied upon during emergencies. Because landlines are more secure and reliable than other communications networks, landline telephones should also be used when relaying highly confidential information related to fatalities and employee injuries.

Text Messages

Text messaging is available on all Company cellular phones, and when cellular service is limited text messaging may work even when voice calls can’t be made. Company employees may use text messaging during emergencies, but caution must be exercised when using text messaging with specific attention paid to only transmitting validated, information related to the incident – and ensuring incident information is only shared with people who have a business or safety need; information shared by text message is recoverable after the event.

Email

All Company employees have email accounts which are used heavily in routine business to record communications. Like with text messages, caution must be exercised when using email with specific

attention paid to only transmitting validated, information related to the incident – and ensuring incident information is only shared with people who have a business or safety need; information shared by email is recoverable after the event.

Everbridge

Everbridge is a Mass Notification software used to activate the EOCs. The software can also be used to provide the TC Energy workforce with time-sensitive safety messages and direction during severe weather, security events, or business continuity situations.

MS Teams

MS Teams is used for communication between the EOCs and ICS FUNCTION ROLES. EOC staff share information, receive requests for support, and discuss incident issues in direct support of the ICS FUNCTION ROLES.

Conference Bridges

Emergency Conference bridges are assigned to several groups in the organization for information sharing.

Regional Conference Bridges may be used to share information between field resources, particularly when joining the MS Teams meeting is not feasible or to discuss tactical issues that only effect Field Operations.

ISTs, Support Departments, Control/Monitoring Centers may also maintain conference bridges for sharing information among their groups. These bridges allow continual information sharing and discussion without bogging down the EOC MS Teams meeting which should be reserved for communication with the ICS Function Roles.

Radios

The Company maintains some base radio stations throughout the USNG operating area at radio frequencies UHF, VHF, 6 GHz Microwave, and 48.72 Spread Spectrum, some Company vehicles are equipped with a Company radio, and some Company locations may also be equipped with handheld radios or walkie-talkies that may be used for local communication needs.

Video Conferencing Systems

The Charleston, WV and Houston, TX locations are also equipped with video conferencing systems.

7. RELEASE DETECTION

Detection and prevention of asset-based emergencies is accomplished through safe operating and maintenance procedures outlined in the Company Operations and Maintenance (O&M) Manual – U.S. Natural Gas Pipelines and Underground Natural Gas Storage Facilities (005404490). The Company O&M Manual is designed to meet the requirements found in federal regulations; the source of the Companies guidance for asset maintenance.

7.1 Release Detection

Gas Control and Company field employees are responsible for ensuring the integrity of facilities and detecting releases.

There are three primary types of indications that an asset-based emergency release may be occurring, notifications of potential rupture:

- An unanticipated or unexplained pressure loss outside of the pipeline's normal operating pressures.
    - Unanticipated or unexplained pressure loss out of the pipeline's normal operating pressure is an event when the controller or personnel witness a pressure loss greater than 10 percent within a time interval of 15 minutes or less, operational need for greater pressure-change threshold due to pipeline flow dynamics will be conducted.
- An unanticipated or unexplained flow rate change, pressure change, equipment function, or other pipeline instrumentation at the upstream or downstream station that may be representative of an unanticipated or unexplained pressure loss outside of the pipeline's normal operating pressure, or
- Any unanticipated or unexplained rapid release of a large volume of gas, a fire, or an explosion, in the immediate vicinity of the pipeline.

All indications, including observation by on-scene personnel with credible sources such as on or off-duty pipeline operator personnel and/or emergency services personnel, are subject to confirmation; however, the Company policy is to shut down if any doubt exists as to the integrity of the pipeline system. The simultaneous occurrence of two or more of the indicators above greatly increases the probability that the system has lost integrity.

Specific guidance for response to abnormal operations and determining the location of a suspected pipeline release may be found in the Company's O&M Manual, maintained separately.

7.2 Investigation of Public Complaints or Inquires

While all events reported to the Monitoring Center are investigated, only certain events may require an immediate response by the Company.

These events may include, but are not limited to:

- Report of gas detected inside or near a building,
- Report of fire located near or directly involving a USNG facility,
- Explosion near or directly involving a USNG facility,
- Report of a damaged facility with escaping gas or indication of broken or open pipe, or

- Natural disaster affecting or near company assets

8. MAINTAINING PREPAREDNESS

Execution of the response process outlined in this plan requires USNG and their response partners to train responders to use and exercise the plan. 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.

8.1 Emergency Preparedness Team

The Emergency Preparedness Team consists of Operations Leaders and Emergency Preparedness Coordinators and are responsible for:

- Maintaining the list of Company employees who may respond in the event of an emergency;
- Making sure this ERP and all Emergency Response References are updated annually (not to exceed 15 months);
- Ensuring that all Company personnel responding to an emergency are trained to assure that they are knowledgeable of the emergency procedures.
- Ensuring required response tools and equipment (i.e. First Responder Kits, Incident Command Post Kits, EOC Kits) are properly maintained.
- Ensuring all accountabilities and responsibilities of the Business Unit are completed in accordance with Emergency Management requirements.

8.2 Emergency Response Training for TC Energy Personnel

Annual training is conducted following these guidelines:

- Employee(s) should be trained on the written emergency procedures in this Plan.
- Training should also include a review of the employee(s) activities (i.e. during an emergency exercise or actual emergency) to verify that the training being provided is effective, and that the procedures were effectively followed during an exercise or actual emergency.
- Training should be provided by persons who are knowledgeable in emergency response and training techniques.
- Training should include employees who are involved with operating and maintaining facilities, dispatching personnel, and those who monitor and control operations at remote facilities.

Training should be emphasized on the following:

- The content of this Plan.
- The physical/electronic location(s) of the Plans and when they should be reviewed and updated.

- The execution of plan procedures, including events that would involve different functional groups (e.g. between Gas Control and emergency response personnel in an emergency.)
- Responsibilities of each employee who may respond to an emergency and the relationship to the emergency procedure. This should include responsibilities for interacting with emergency responders in an Incident Command System.
- Handling phone calls at the local office, proper communication with the caller, and how to determine from where the caller is calling from.
- Applicable forms and documentation requirements.

Specific training requirements, which qualify individuals for response roles, shall be documented in the training curriculum and recorded in the Company's Learning Management System.

8.3 Liaison with Emergency Services

Company personnel shall establish and maintain adequate means of communication with the appropriate public safety answering points (i.e., 9-1-1 emergency call center), where direct access to a 9-1-1 emergency call center is available from the location of the pipeline, and fire, police, and other public officials to:

- Learn the responsibility and resources of each government organization that may respond to a facility emergency.
- Acquaint officials with the Company's ability to respond to a facility emergency.
- Identify the types of facility emergencies in which they may be notified.
- Plan how the Company and emergency officials can engage in a mutual assistance that will minimize hazards to life and/or property.

This contact is generally established through the public awareness meetings scheduled under the Public Awareness Program but shall be augmented with:

- Consultation during ERP and/or Emergency Response Reference development and maintenance
- Invitation and engagement of Emergency Services during exercises.

8.4 Emergency Response Exercises

Emergency response exercises are conducted to test the accuracy and effectiveness of emergency response plans, training and resourcing.

An exercise is defined as a simulation of an actual emergency; simulation enables employees to learn by practicing their emergency response roles and skills. Exercises also provide the opportunity to learn and to problem solve, avoiding potential issues and concerns during an actual emergency.

Several types of exercises are recognized by the Company to achieve the goals listed above. The type of exercise chosen depends on the purpose, availability of resources, and limitations of conducting exercises that apply to that specific location or facility. Wherever practical, external parties that would normally be involved in an actual response are invited to participate in Field Exercises.

- Tabletop Exercises use an informal meeting format where internal staff with emergency response responsibilities work through an actual or potential emergency scenario. The team assembles to review any applicable emergency response procedures and test any communication equipment that would be used during emergency response (i.e. satellite phones, notification systems etc.)..
- Field Exercises are operations-based exercises designed to assess and evaluate capabilities and functions while in a realistic, real-time environment; however, movement of resources is usually simulated. Field Exercises should involve External Agencies (i.e. emergency service agencies such as police, fire ambulance, regulators, government officials, Municipal stakeholder groups, and contractors.) and the Exercise Design Team should develop the emergency scenario using input for outside agencies during the planning stage so such agencies can plan to meet the objectives they establish for the exercise.

8.4.1 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 it can be done better by the participants and those responsible for response to a real emergency. The goal of the debriefing is to review 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 associated training and resourcing.

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 for documenting all emergencies and exercises.

Following an exercise:

- A debrief will be prepared which identifies the key learnings and recommendations arising from the evaluation process.
- EPC shall ensure a debrief is prepared and recorded in the Enterprise Incident Management Software within 30 days of the exercise debrief.
- Each recommendation or action item listed on the debrief must be dated and assigned. All action items will be documented and managed through the Enterprise Incident Management Software to ensure completion of the action is tracked. The EPC is accountable to ensure all action items are completed..

A debrief is separate from the post-failure and incident reviews (explained in section 5.11), which must also include emergency communications, emergency procedure manuals and specifications. The post-failure and incident review must review all factors that may have impacted the release volume and the consequences of the incident.

8.5 Review and Revision of this Plan/Manual

The content of this Plan is reviewed, reassessed and updated by operating personnel at least once each calendar year (not to exceed 15 months). The five most recent revisions to this Plan 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 TC Energy's document management system, the Controlled Document Library (CDL). All Regional Directors who are accountable for emergency action are furnished a copy of the latest edition of this Plan, as listed in the Distribution List found immediately after the Revision History of this Plan.

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.

RESPONSE ZONE ANNEXES

Response Zone	USGO Region	OpenText Item ID
Response Zone 1	Central Region	65727192
Response Zone 2	Mid-Atlantic Region	65595399
Response Zone 3	Erie Plains Region	65723853
Response Zone 4	American Gulf Region	65566601
Response Zone 5	Upland Prairie Region	65675380
Response Zone 6	Great Lakes Region	65588834
Response Zone 7	Heartland Region	65699194
Response Zone 8	Appalachia Region	109707260
Response Zone 9	Pacific Mountain Region	109748546
Response Zone 10	Underground Natural Gas Storage Response Zone	65608562
Response Zone 11	USNG Projects Annex	109465561

APPENDIX A CONTACT INFORMATION

TC Energy Emergency (24hr) Telephone Number

Entity	Telephone Number	Address
Columbia Gas Transmission, Crossroads, and Millennium Pipeline Monitoring Center	800-835-7191	1700 MacCorkle Avenue SE Charleston, WV 25314
Columbia Gulf Monitoring Center	866-485-3427	1700 MacCorkle Avenue SE Charleston, WV 25314
American Natural Resources Corporation (ANR) ANR Storage Bison Pipeline GAP East/ TC Louisiana Interstate (TCLI) Gas Transmission Northwest (GTN) Great Lakes Gas Transmission (GLGT) Iroquois Gas Transmission System North Baja Pipeline System Northern Border Pipeline CompanyTuscarora Gas Transmission Company (TGTC)	800-447-8066	Varied
Iroquois Gas Transmission System	800-888-3982	Varied

Control Center(s)

Entity	Telephone Number	Address
Charleston Gas Control Center	304-357-2008 304-357-2009	1700 MacCorkle Avenue SE Charleston, WV 25314
Houston Gas Control Center	888-GAS-CTRL (888-427-2875)	700 Louisiana Street Houston, TX 77002

Company Contacts

Name	Role	Office Phone	Cell Phone
Meera Kothari	Vice President US Gas Operations	832-320-5190	832-523-9751
Desiree Cromwell	Director, American Gulf Region	832-320-5432	832-778-7288
Rene Norman	Director, Appalachia Region	304-357-2419	304-382-9858
John Corlis	Director, Central Region	740-746-2259	859-595-8041
Tracy Sparks	Director, Erie Plains Region	724-223-2751	724-882-9149
Scott Hoelscher	Director, Great Lakes Region	N/A	563-210-5084
Dustin Enright	Director, Heartland Region	N/A	309-507-1400
Mike Kubincanek	Director, Mid-Atlantic Region	724-223-2767	724-630-0858

Name	Role	Office Phone	Cell Phone
Jeff Pollock	Director, Pacific Mountain Region	615-465-5160	615-571-1543
Grant Knoettgen	Interim Director, Upland Prairie Region	N/A	563-210-5084

APPENDIX B FORMS

Company First Responder Kit Forms

- First Responder Responsibilities & Action Checklist (05980754)
- ICS 201 Incident Brief (008942416)
- ICS 214a Individual Log (65528333)
- Emergency Planning Zones (65584248)
- Guidelines for Note Taking, Communications and other Records Produced During an Emergency (004825243)

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

Standards, Operating Processes and Procedures (Accessible through Controlled Document Library)

- Critical Injury and Fatality Response Procedure (006198710)
- Bomb and Sabotage Threat Response Process (CD90000123)
- CSO PRO Cybersecurity Incident Response Process (63019520)
- Incident Management Standard (CD90000698)
- Operations and Maintenance (O&M) Manual – U.S. Natural Gas Pipelines and Underground Natural Gas Storage Facilities (005404490)
- Physical Security and Security Systems Standard (1020373672)
- Physical Security Recurring Activities Task Package (005745269)
- Risk Management Standard (008749510)
- Security Risk Assessment Standard (CAN-US-MEX) (1020373656)
- Security Threats Process (CD90000100)
- TEP-IN-FAIL-GL Pipeline Failure Field Investigation (006162270)
- Vehicle Inspection (1019864484)

Miscellaneous Forms and Resources

- Emergency and Exercise Debriefing Form (004460398)
- Incident Command Post Kit Requirements Checklist (003674777)
- US Emergency Management (Website)