



canadian | association
energy | canadienne
pipeline | de pipelines
association | d'énergie

Suite 200 505 3rd St SW
Calgary, Alberta T2P 3E6

P: (403) 221 8777
F: (403) 221 8760
aboutpipelines.com

CEPA Initiative: Response Time Guideline

2015
EMERGENCY SECURITY MANAGEMENT WORK GROUP

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1.0 Background

PURPOSE

This document proposes response time guidelines for CEPA members. The Response Time Guideline is intended to help companies identify and position people and equipment before an incident occurs, and to implement supporting procedures.

This guideline's response times are not intended as a measure of performance during a response. The safety of the public and employees are always the first priority. Good decisions and safe behavior are more important than speed.

The Response Time Guideline was endorsed by the Executive Operations Standing Committee (June 18, 2014) and is subject to review and revision by CEPA's Board of Directors.

SCOPE

This guideline's scope includes an emergency's location, jurisdiction, type of operation, products and circumstance.

The Response Time Guideline applies specifically to confirmed emergency events for CEPA member pipelines. These pipelines include:

- Canadian regulated pipelines
- Transmission pipeline systems
- Liquid and gas pipelines including high vapour pressure (HVP) and low vapour pressure (LVP)

DEFINITIONS

Detection time: The time at which an emergency is initially suspected. The detection time period includes investigation activities that may lead a company to recognize an emergency.

Recognition time: The time at which an emergency has been recognized. This begins either when an emergency is verified by a company's SCADA (supervisory control and data acquisition) system or after calls to a company's emergency line identify an operational upset or abnormal conditions.

Response time: The time between the recognition time and the initiation of emergency response activities.

Emergency Response Management System: Describing a company's overarching emergency response activities activated in response to an emergency event.. The emergency response may include setting up communication protocols, activating related groups within a company, structuring an Emergency Operation Centre, and structuring an Incident Command Post.,.

Emergency Operation Centre: A location within a company's offices used to remotely coordinate its emergency response.

Incident Command Post: A location near the site of the emergency used to coordinate a company's on-site emergency response.

Incident Command System: Incident Command System (ICS) is a common type of response management system that defines the structure, roles and responsibilities that can be used an emergency event. This system is designed to be both flexible and scalable, and therefore is applicable across a range of incidents that may differ in terms of size, scope and complexity."

Response phases:

- **Phase One – Pipeline shutdown:** Initial remote shutdown of the pipeline through the company’s control centre.
- **Phase Two – Emergency response activities:** Structuring of the Emergency Response Management System, which occurs immediately upon recognition. The Incident Command System will be established in no more than two hours.
- **Phase Three – Staff on site:** The company’s first responder arrives on scene within three hours.
- **Phase Four – Emergency response equipment on site:** Initial response equipment arrives on site within six hours after the event has been recognized. For oil, additional supporting requirements will take less than 72 hours. The on-site response can be achieved with either employees, contractors or mutual aid/spill cooperatives.

GUIDELINE DEVELOPMENT STRATEGY

The following framework was used to develop the Response Time Guideline:

1. The Response Time CEPA Committee addressed response to emergency events beginning from recognition time. The committee worked from the premise that an emergency has been recognized with all actions after this point contributing to the Response Time Guideline.

Note: Proactive steps, such as shutting down the pipeline system and setting up an Emergency Operation Centre, may be taken in the detection time phase but these actions are not part of the Response Time Guideline until an emergency has been declared.

2. The Committee examined the response times set by the US Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA) for oil response, attached as Annex A. (Qualifiers are listed with the applicable phase.)

Note: The National Energy Board (NEB) and PHMSA have a memorandum of agreement and the NEB is aware of the PHMSA’s response times.

3. The Committee included all CEPA full member pipeline companies and all pipeline locations within the guideline’s scope, recognizing that emergency response processes are similar for all pipeline segments. To better evaluate the characteristics of each location, the Committee considered extenuating factors that could affect a company’s ability to get to site (see: Section 3.0: Extenuating Circumstances).
4. The Committee has considered the Canadian Transportation Guideline of 60 km/h as the average travel speed to an emergency. By using this guideline’s safe response speed, companies can use distance and speed to determine the amount of time it would take to dispatch people and equipment to the site. This will aid in resource allocation strategies.

2.0 Response Time Guideline

After an incident has been recognized the response is divided into four phases. While the phases appear in sequence these phases may activate concurrently at the time of recognition.

Timing of each of these events begins with the recognition time and not with detection time.

PHASE OF RESPONSE	EXPECTED PERIOD OF TIME*
PHASE 1 – Pipeline shutdown	Immediately upon recognition of a pipeline emergency** Once an emergency event has been recognized the pipeline will immediately be shut down remotely through a control centre.
PHASE 2 – Emergency response activities	Two hours An Emergency Response Management System will be structured immediately once an emergency has been recognized. An Incident Command System will be established in no more than two hours. Emergency response activities may include establishing an Emergency Response Structure, an Emergency Operation Centre and other initial response activities en route to the site.
PHASE 3 – Staff on-site	Three hours The company’s first responder*** will arrive on scene within three hours.
PHASE 4 – Initial emergency response equipment on site	Six hours – natural gas and oil**** Initial response equipment will be on site no more than six hours from recognition. For oil, additional supporting requirements will take no more than 72 hours. The on-site response can be achieved with either employees, contractors or mutual aid/spill cooperatives.

* Extenuating circumstances may create deviations from the Guideline (see Section 3.0: Extenuating Circumstances)

** “Pipeline emergency” is defined by member companies

*** “Company’s first responder” refers to a company employee, mutual aid partner, contractor or anyone representing the company at the site of an emergency

**** Emergency response equipment for oil is based on a formula that calculates the worst-case discharge, which in turn determines the appropriate amount of equipment for response

3.0 Extenuating Circumstances

The Response Time CEPA Committee has determined a number of extenuating circumstances that would affect arrival times at an emergency site for phases 2 through 4. These circumstances may be used to qualify any discrepancies between expected and actual response times.

Extenuating circumstances include:

- **Safety of employees and the public**
The safety of employees and the public is our first priority. Safety rules and regulations will always take priority over arriving at an emergency site at a particular time.
- **Remote locations**
Access to a remote site affects the type and availability of resources, operational considerations and the safety of company staff.
- **Time of day**
Certain transportation modes, such as helicopters, are restricted during low-light hours. Nighttime also increases the probability of animal strikes, requiring slower response speeds.
- **Weather conditions**
Weather conditions can limit or alter the transportation mode used for response which would increase response timelines. For example, blizzard conditions can delay response times due to the need for slower speeds.
- **Communications**
Arrival times could be affected by compromised communication infrastructure.
- **Road closures due to natural disasters**
Arrival times could be affected by roads closed due to current weather conditions or past natural disasters (e.g. flooded highway, road damaged due to forest fire, earthquake, etc.).
- **Transportation issues**
Arrival times could be affected by road closures or detours due to serious traffic accidents or rush hour traffic. Other impacts to local infrastructures could include power failure, road closures and road repair.
- **Site seizure**
Local authorities may deny access to a site due to terrorism or civil unrest.
- **Other agency / government interference**
During an area emergency, government agencies may second company resources like helicopters or other vehicles.

ANNEX A – Reference Materials

1. US - Pipeline and Hazardous Materials Safety Administration (PHMSA)

Excerpted from 49 CFR Part 194, Section 115 – Response resources

(a) Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge.

(b) An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge, as follows:

	Tier 1	Tier 2	Tier 3
High volume area	6 hrs	30 hrs	54 hrs.
All other areas	12 hrs	36 hrs	60 hrs

Response resources means the personnel, equipment, supplies, and other resources necessary to conduct response activities

High Volume Areas are listed in Part 194 Appendix B and include areas that have high vessel traffic and/or high river velocity and/or concentrations of pipelines.

Tier means the combination of required response resources and the times within which the resources must arrive on scene.

Note: The CEPA Response Time Committee recommends a six-hour response time for all pipeline segments, not only the high volume areas identified by CFR Part 194.

2. Transport Canada

Excerpted from <http://www.tc.gc.ca/eng/marinesafety/tp-tp14539-review-current-regime-2279.htm>

Under Sections 660.2(b) and 660.4(b), ships and OHFs are required to have an arrangement with a certified RO [Responsibility Organization]. ROs receive certification from Transport Canada following a review of the response plan submitted as part of their application. The response plan provides detailed information on the RO's procedures, equipment and resources to meet the tiered response capabilities set out in Section 2 of the Response Organization Guideline, which specify the time within which an RO must respond to a spill of a specified quantity, as set out below:

Tier 1

Quantity of Oil: 150 tonnes

Response Time Requirements: 6 hours (for equipment to be deployed on-site)

Tier 2

Quantity of Oil: 1,000 tonnes

Response Time Requirements: 12 hours (for equipment to be deployed on-site)

Tier 3

Quantity of Oil: 2,500 tonnes

Response Time Requirements: 18 hours (for equipment to be on-site)

Tier 4

Quantity of Oil: 10,000 tonnes

Response Time Requirements: 72 hours (for equipment to be on-site)