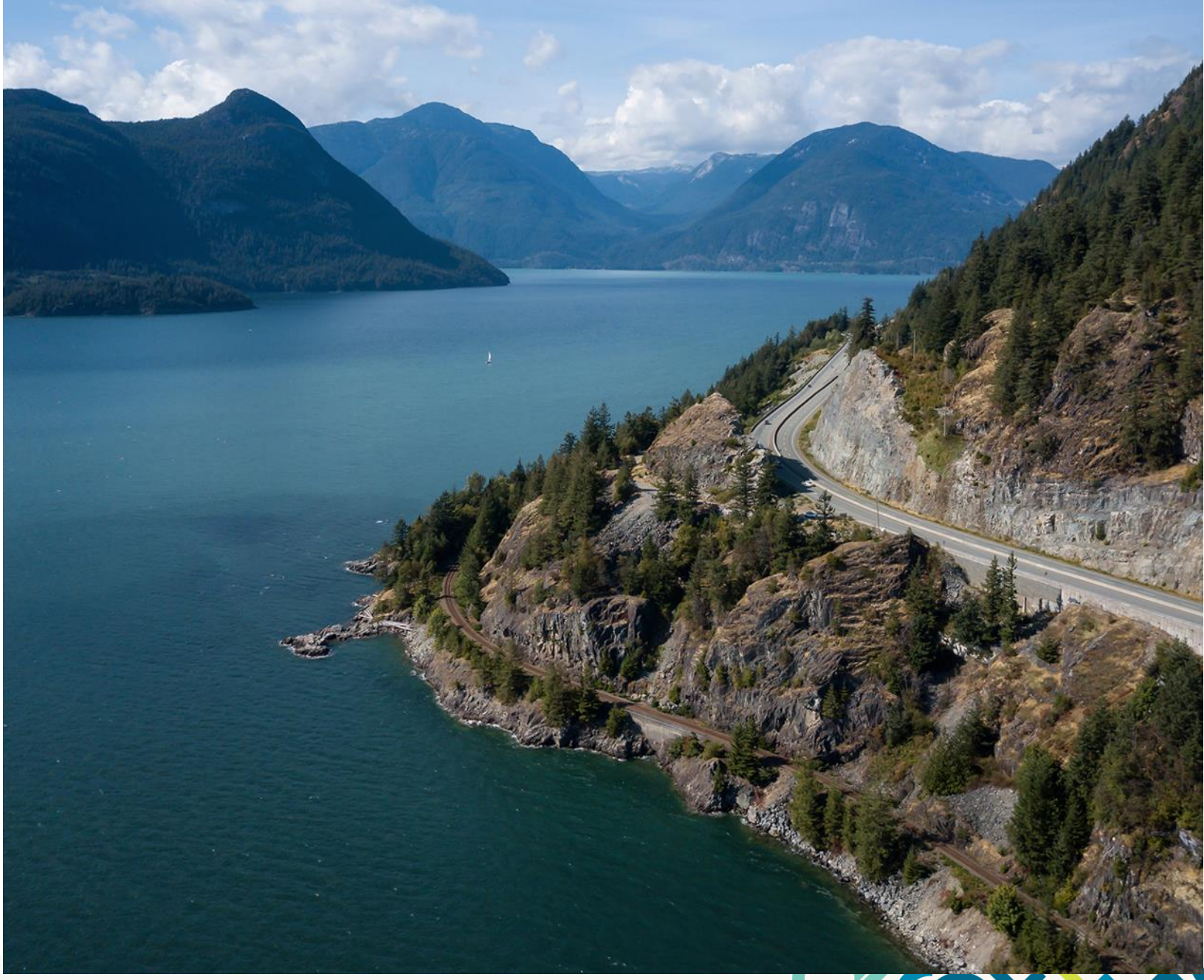

YOU’RE NOT ALONE!

Practical tools for
planning and responding to
dangerous goods incidents

Transport Canada Transports Canada

Canada

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Introduction

In the years following the tragic derailment at Lac-Mégantic, the Transportation of Dangerous Goods (TDG) Directorate has been working on the development of awareness materials for first responders to help them respond to rail incidents involving flammable liquids. The You're Not Alone! emergency response planning document for rail incidents involving flammable liquids provides information on tools and resources accessible to first responders in case of a rail incident involving flammable liquids (e.g. crude oil, diesel or gasoline).

As part of the tools developed to guide first responders through the critical steps of responding to a rail incident involving flammable liquids, an aide-mémoire was created. This checklist was developed based on recommendations from the Emergency Response Task Force (ERTF) and the Vulcan full-scale exercise in British Columbia in 2016. The checklist was also used and tested as part of the Athena full-scale exercise in Quebec in 2017.

TDG continues working to improve responses to rail incidents involving flammable liquids as well as improving the response to incidents involving other dangerous goods in transport.

The purpose of this document is to provide practical tools to help first responders and local communities plan, prepare and respond to incidents involving dangerous goods in transport. It includes three practical sheets that can be adapted to fit local needs:

- **Aide-mémoires for First Responders**: checklists developed for different classes and divisions of dangerous goods, for use on site of an incident;
- **Dangerous Goods Incident Worksheet**: to log important information when using the Aide-mémoire for First Responders; and,
- **Dangerous Goods Incident Pre-plan Worksheet**: a pre-planning tool.

This document is divided into three sections with descriptions and instructions to help fill out and use the checklist and worksheets mentioned above.

It is suggested that these sheets are used during training and exercises in order to help first responders familiarize themselves with the sheets and adapt them to their needs. Changes can be made to the sheets to suit a variety of different situations, and they will help ensure communities are prepared for an incident involving dangerous goods.

Most importantly, remember: **You're not alone!**

Section 1: Aide-Mémoires for First Responders

The Aide-mémoires for First Responders provide a step by step approach for dealing with transport incidents involving dangerous goods. They are available for 15 classes and divisions of dangerous goods that contain products for which an Emergency response assistance plan (ERAP) may be required.

Each Aide-mémoire is a two-page checklist or quick reference sheet that summarizes the most important considerations for this specific class or division of each dangerous good. They also outline the **five key steps** to follow when dealing with an incident involving dangerous goods.

The five key steps are:

1- **Do not rush**
2- **Secure the scene**
3- **Identify the hazards and assess the situation**
4- **Get help**
5- **Respond**

The Aide-mémoires are tools that can also be used during the development of a local emergency plan as well as during training and exercises. Knowing the most important steps will help first responders be better prepared for an incident involving dangerous goods in their community.

The Aide-mémoires available are:

- **Class 1 – Explosives**
- **Class 2.1 – Flammable gases**
- **Class 2.2 – Non-flammable, non-toxic gases**
- **Class 2.2(5.1) – Oxygen and oxidizing gases**
- **Class 2.3 – Toxic gases**
- **Class 3 – Flammable liquids**
- **Class 4.1 – Flammable solids**
- **Class 4.2 – Substances liable to spontaneous combustion**
- **Class 4.3 – Water-reactive substances**
- **Class 5.1 – Oxidizing substances**
- **Class 5.2 – Organic peroxides**
- **Class 6.1 – Toxic substances**
- **Class 6.2 – Infectious substances**
- **Class 7 – Radioactive materials**
- **Class 8 – Corrosives**

Note: The Aide-mémoires for First Responders are not intended to replace the Emergency Response Guidebook (ERG) but should be used in combination with it: they are quick reference tools that outline the most important considerations and steps to follow during an incident and should be used **with** the ERG.

Aide-mémoire for First Responders
Class 1 - Explosives

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred course of action when dealing with explosive materials until more information or qualified personnel are available to provide assistance.
- When explosives are **directly involved in a fire**, **non-intervention** and **isolating the area** are the priorities: any other response actions would greatly endanger responders and public safety.
- **Energy isolation** (e.g. fuel sources, ignition sources) is of primary importance.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 112 until the explosive(s) have been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, particulates, container damage, possible rupture and other DG (e.g. corrosive, toxic, flammable)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. Natural Resources Canada [NRCan] specialists, industry specialists, emergency response contractors, government representatives)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, specialized equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ When explosives are **directly involved in a fire**, **prioritize non-intervention** and **isolate** the area to ensure the safety of responders and the public

☐ **Energy isolation** (e.g. fuel sources, ignition sources) is of primary importance

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. NRCan specialist, Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Specialized monitoring, if applicable

☐ Mitigation of spills / containment / confinement

☐ DG transfer / repackaging / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 2.1 – Flammable gases

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Be aware of any **release** from the pressure relief device (PRD), which indicates a pressure increase.
- When damaged or exposed to fire, pressurized containers pose a risk of **BLEVE** (Boiling Liquid Expanding Vapor Explosion), refer to the Emergency Response Guidebook (ERG).
- Vapours may be **heavier** than air, **accumulate** in low lying areas or **travel** to a source of ignition and **flash back**.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the ERG – GUIDE 118 until the gas has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitor** oxygen level and flammability (e.g. 4-gas detector)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage and other DG (e.g. corrosive, toxic)
- ☐ **Monitor** for any release from the PRD and **assess** for potential risks of a **BLEVE**
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, water supply, specialized equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ **Evaluate** potential risks for **BLEVE**, due to container damage or fire exposure

☐ Vapours may be **heavier** than air, **accumulate** in low lying areas or **travel** to a source of ignition and **flash back**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: strategies and tactics specific to flammable gases fires and pressurized containers

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression or diversion with water fog / spray, with confinement of run-off

☐ Depressurization

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 2.2 – Non-flammable, non-toxic gases

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Be aware of any **release** from the pressure relief device (PRD), which indicates a pressure increase.
- When damaged or exposed to fire, pressurized containers can cause a **BLEVE** (Boiling Liquid Expanding Vapor Explosion), refer to the Emergency Response Guidebook (ERG).
- Vapours may be **heavier** than air and **accumulate** in low lying areas, where they may displace oxygen (may cause **dizziness** or **asphyxiation** without warning).
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the ERG – GUIDE 121 until the gas has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitor** oxygen level (e.g. 4-gas detector)

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage and other DG (e.g. corrosive, toxic)
- ☐ **Monitor** any release from the PRD and **assess** for potential risks of a **BLEVE**
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, water supply, specialized equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ **Evaluate** potential risks for **BLEVE**, due to container damage or fire exposure

☐ Vapours may be **heavier** than air and **accumulate** in low lying areas, where they may displace oxygen (may cause **dizziness** or **asphyxiation** without warning)

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: strategies and tactics specific to pressurized containers

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression or diversion with water fog / spray, with confinement of run-off

☐ Depressurization

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 2.2(5.1) – Oxygen and oxidizing gases

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Be aware of any **release** from the pressure relief device (PRD), which indicates a pressure increase.
- When damaged or exposed to fire, pressurized containers pose a risk of **BLEVE** (Boiling Liquid Expanding Vapor Explosion), refer to the Emergency Response Guidebook (ERG).
- Gases may ignite **combustible** materials (e.g. wood, paper, oil) and will **accelerate combustion**.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the ERG – GUIDE 122 until the gas has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitor** oxygen level (e.g. 4-gas detector)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage and other DG (e.g. corrosive, toxic)
- ☐ **Monitor** any release from the PRD and **assess** for potential risks of a **BLEVE**
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, water supply, specialized equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ **Evaluate** potential risks for **BLEVE**, due to container damage or fire exposure

☐ Gases may ignite **combustible** materials (e.g. wood, paper, oil) and will **accelerate combustion**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: strategies and tactics specific to pressurized containers

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression or diversion with water fog / spray, with confinement of run-off

☐ Depressurization

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 2.3 – Toxic gases

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Be aware of any **release** from the pressure relief device (PRD), as the gas released is **TOXIC**.
- When damaged or exposed to fire, pressurized containers pose a risk of **BLEVE** (Boiling Liquid Expanding Vapor Explosion), refer to the Emergency Response Guidebook (ERG).
- The gas may also present other hazards like **corrosivity**, **flammability** or **oxidizing** properties.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the ERG – GUIDE 123 until the gas has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitoring** may be performed once the substance has been identified (e.g. colourimetric tubes), **be aware of limitations** regarding detection (e.g. 4-gas detector may not be suitable)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage and other DG (e.g. flammable, corrosive)
- ☐ **Monitor** any release from the PRD and **assess** for potential risks of a **BLEVE**
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, specialized detection equipment, decontamination solution)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ **Evaluate** potential risks for **BLEVE**, due to container damage or fire exposure

☐ Be aware of any **release** from the pressure relief device (PRD), as the gas released is **TOXIC** and it may present other hazards like **corrosivity**, **flammability** or **oxidizing** properties

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: strategies and tactics specific to pressurized containers

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression or diversion with water fog / spray, with confinement of run-off

☐ Depressurization

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 3 – Flammable liquids

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred course of action when large volumes of flammable liquids are involved.
- **Rail** incidents involving flammable liquids **on fire** require a **specialized response**, a solid knowledge of the products involved and the high risk hazards such as **Heat Induced Tears (HIT)**, as well as the firefighting techniques specific to such fires.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 127 until the flammable liquid has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitor** air quality, oxygen level and flammability (e.g. 4-gas detector)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, and other DG (e.g. corrosive, toxic)
- ☐ **Assess** for potential risks of ruptures, called Heat Induced Tears (HIT)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, water supply, fire fighting foam, specialized equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Vapours are **heavier** than air, they may **accumulate** in low lying areas or **travel** to a source of ignition and **flash back**

☐ For rail incidents involving fire, **evaluate** potential risks for **Heat Induced Tear (HIT)**, boilover, frothover, slopover

☐ Be aware of any **release** from the pressure relief device (PRD), which indicate a pressure increase

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / protection / evacuation

☐ Detection and air monitoring

☐ Firefighting: strategies and tactics specific to flammable liquid fires (non-intervention, defensive, offensive)

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression with compatible fire-fighting foam with confinement of run-off

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 4.1 – Flammable solids

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Incidents involving flammable solid **fires** require the knowledge of the **specific response strategies** and the use of **appropriate extinguishing agents**.
- Substances may present additional hazards such as **toxicity** and **corrosivity**.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** Emergency Response Guidebook (ERG) – GUIDE 134 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitor** oxygen level and flammability (e.g. 4-gas detector)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. corrosive, toxic)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, extinguishing agents, equipment for product recovery)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Flammable solid fires require **appropriate extinguishing agents**, **contact** CANUTEC for guidance

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: use appropriate strategies and extinguishing agents

☐ Mitigation of spills / containment / confinement

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders

Class 4.2 – Substances liable to spontaneous combustion

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances may **ignite** on contact with air or moisture and produce **toxic** or **corrosive** gases.
- If involved in a fire, use **appropriate extinguishing agents**. Water and foam are **NOT** recommended.
- The **temperature** of the dangerous goods should be monitored as a change may indicate a reaction is occurring.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 136 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Be aware** of **exposure** and **contamination** to personel and victims; substances may cause chemical burns; seek **guidance** for **decontamination**
- ☐ **Monitor** temperature (e.g. infrared camera), air monitoring will offer limited assistance
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. corrosive, toxic)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, extinguishing agents, equipment for confinement)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Substances may **ignite** on contact with air or moisture

☐ If involved in a fire, **use** appropriate extinguishing agents: water and foam are **NOT** recommended

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: use appropriate strategies and extinguishing agents (water and foam are **NOT** recommended)

☐ Mitigation of spills / containment / confinement

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 4.3 – Water-reactive substances

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances **produce flammable** gases on contact with water or moist air.
- Some substances may **produce toxic** gases, requiring evacuation or shelter in place.
- If involved in a fire, use **appropriate extinguishing agents**. Water and foam are **NOT** recommended.
- The **temperature** of the dangerous goods should be monitored as a change may indicate a reaction is occurring.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 139 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Be aware** of **exposure** and **contamination** to personel and victims; seek **guidance** for **decontamination**
- ☐ **Monitor** temperature (e.g. infrared camera), air monitoring will offer limited assistance
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. corrosive, toxic)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, extinguishing agents, equipment for confinement)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Water-reactive substances **produce flammable** gases on contact with water or moist air; some substances may also **produce toxic** gases

☐ If involved in a fire, **use** appropriate extinguishing agents: water and foam are **NOT** recommended

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: use appropriate strategies and extinguishing agents (water and foam are **NOT** recommended)

☐ Mitigation of spills / containment / confinement

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 5.1 – Oxidizing substances

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances may **ignite** combustible materials (e.g. wood, paper, oil).
- When involved in a fire, substances will **react** and generate oxygen, **intensify** the fire and make it harder to extinguish; **appropriate extinguishing agent** is required.
- When mixed with some petroleum products (e.g. asphalt), the mixture can become **shock sensitive** or a **powerful explosive**.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 143 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitoring** oxygen level (e.g. 4-gas detector) may provide an indication that a reaction occurring
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. flammable, corrosive)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, equipment for confinement, non-combustible absorbent materials, appropriate extinguishing agent)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Substance may **ignite** combustible materials (e.g. wood, paper, oil)

☐ When involved in a fire, substances will **generate** oxygen, **intensify** the fire and make it harder to extinguish; **use** appropriate extinguishing agent

☐ When mixed with some petroleum products (e.g. asphalt), the mixture can become **shock sensitive** or a **powerful explosive**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. ERAP holder)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: use appropriate strategies and extinguishing agents

☐ Mitigation of spills / containment / confinement

☐ Absoption with non-combustible materials

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 5.2 – Organic peroxides

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances may **ignite** combustible material (e.g. wood, paper, oil).
- Substances may be **sensitive** to **impact** or **friction**, may **explode** from heat or contamination and will **accelerate** burning when involved in a fire.
- Some substances are **temperature controlled** and must not be allowed to warm-up in order to prevent a reaction.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 148 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitoring** oxygen level (e.g. 4-gas detector) may provide an indication that a reaction occurring
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. flammable, corrosive)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** to the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, equipment for confinement, non-combustible absorbent materials, appropriate extinguishing agent)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Substances may **ignite** combustible material (e.g. wood, paper, oil)

☐ Substances may be **sensitive** to **impact** or **friction**, may **explode** from heat or contamination and will **accelerate** burning when involved in a fire

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Firefighting: use appropriate strategies and extinguishing agents; water spray is preferred with confinement of run-off water

☐ Mitigation of spills / containment / confinement

☐ Absoption with non-combustible materials

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 6.1 – Toxic substances

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances are **highly toxic**, they are liable to seriously **harm** human health or cause **serious injury** or **death**, if **inhaled**, **swallowed** or by **skin contact**.
- Some substances may react with **water** or **moisture** to produce **toxic** gases.
- **Confine** spilled substances and **avoid** contamination to nearby water sources.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 153 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitoring** may be possible once the substance has been identified (e.g. colourimetric tubes)
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. flammable, explosive)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, specialized detection equipment, decontamination solution, equipment for confinement)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Substances are **highly toxic**, they are liable to seriously **harm** human health or cause **serious injury** or **death** if **inhaled**, **swallowed** or by **skin contact**

☐ Some substances may react with **water** or **moisture** to produce **toxic** gases

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Mitigation of spills / containment / confinement

☐ Vapour diversion with water spray, with confinement of run-off

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 6.2 – Infectious substances

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Substances are known or suspected to contain **pathogens** which can cause **disease** in humans or animals.
- **Inhalation** or **contact** with these substances may cause **infection**, **disease** or **death**.
- **Be aware** of direct or indirect **exposure** and **contamination** to personel and victims, signs and symptoms may be **delayed**: seek guidance for **decontamination** procedures.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 158 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Monitoring** may be possible, by trained personnel with specialized equipment

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. toxic, explosive)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, specialized detection equipment, decontamination solution, equipment for confinement)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ Substances are known or expected to contain **pathogens** which can cause **disease** in humans or animals

☐ **Inhalation** or **contact** with these substances may cause **infection**, **disease** or **death;** signs and symptoms may be **delayed**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / evacuation / shelter in place

☐ Specialized detection

☐ Mitigation of spills / containment / confinement

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 7 – Radioactive materials

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action, until more information, qualified personnel and radiation detection equipment are available to provide assistance.
- Radiation presents **minimal risks** to transport workers, emergency response personnel and the public during transportation incidents. Packaging durability increases as the potential hazard of radioactive content increases.
- **Be aware** of potential exposure and contamination to personel and victims, seek guidance on **decontamination**.
- Some radioactive materials may also present other **hazards** (e.g. **toxic**, **corrosive**).
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 163 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **Be aware** that **radiation** exposure and contamination could be present and the required decontamination
- ☐ **Radiation monitoring** must be **conducted** by trained and equipped personnel

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. flammable, explosive)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:
- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number

☐ **Call CANUTEC who will contact the Canadian Nuclear Safety Commission (CNSC) Duty Officer who will assist the responders on scene either by phone or by attending on site**

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. CNSC representatives, industry specialists, emergency response contractors, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, radiation detection equipment, decontamination solution, specialized response equipment)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

☐ **Response** actions to be performed by **trained** and **equipped** personnel

☐ **Be aware** of potential exposure and contamination, direct and indirect, to personnel and victims

☐ **Seek** guidance for **decontamination**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. CNSC representatives, Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

☐ Rescue / shelter in place / evacuation

☐ Radiation monitoring

☐ Mitigation of spills / containment / confinement

☐ DG transfer / repackaging / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

Aide-mémoire for First Responders
Class 8 – Corrosives

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred initial course of action.
- Corrosive materials may present other **hazards** such as **high toxicity**, **flammability** or **oxidizing** properties.
- Some corrosive materials may react and **generate hydrogen gas** which is **highly flammable**.
- Spilled product should be **kept away** from **water and moisture**.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at **613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)**

Step 1: Do not rush

Protect first responders and the public

- ☐ **Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 153 until the dangerous good has been identified
- ☐ When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- ☐ **Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- ☐ **Wear** appropriate personal protective equipment (PPE)
- ☐ **DO NOT use** 4-gas detector in a corrosive atmosphere, **use** pH paper or colorimetric tubes when appropriate
- ☐ **Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- ☐ **Contact** local authorities to secure the scene
- ☐ In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- ☐ **Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. flammable, toxic)
- ☐ **Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- ☐ **Determine** all of the DGs involved and their UN numbers, by:
  - ☐ **Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
  - ☐ **Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- ☐ **Monitor** any changes in the situation

Confirm the isolation zones

- ☐ Once all the UN numbers are identified, **check** the specific **orange ERG** Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)	→	In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

☐ **Call** an emergency number located on the shipping document:

- 24 hour number, or
- Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
- CANUTEC

☐ If needed, **ask** for mutual aid assistance from nearby communities or **contact** other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

☐ **Be prepared** to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)

☐ **Organize** the site and resources according to what may be required (e.g. physical zones, neutralizing agents, equipment for confinement)

☐ **Re-evaluate** isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP	
Over the phone	• Technical or emergency response advice • Assistance is provided within 10 minutes of the initial request
On site*	• Response personnel with appropriate equipment • Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations:

☐ Corrosive materials may present other **hazards** like **high toxicity**, **flammability** or **oxidizing** properties

☐ Some corrosive materials may react and **generate hydrogen gas** which is **highly flammable**

☐ **Ensure** the response is **Timely, Appropriate, Safe and Coordinated (TASC)**

☐ **Integrate** site safety plan and site safety briefing

Personnel that may be present on site:

☐ Carrier

☐ Industry specialists (e.g. person with the ERAP)

☐ Emergency response contractors

☐ Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions:

☐ Rescue / evacuation / shelter in place

☐ Detection and air monitoring

☐ Mitigation of spills / containment / confinement

☐ Vapour suppression or diversion with water fog / spray, with confinement of run-off

☐ Absorption / neutralization

☐ DG transfer / recovery

Reassess / modify the incident action plan

☐ **Establish** follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

☐ **Transfer** operational management for site recovery, restoration and rehabilitation

How to use the Aide-mémoires for First Responders

Each Aide-mémoire lists actions and considerations in **five** key steps:

1- **Do not rush**
2- **Secure the scene**
3- **Identify the hazards and assess the situation**
4- **Get help**
5- **Respond**

Each step includes a list of elements that should be considered, alongside check boxes that can be marked when each step is complete.

Each section below explains how to use the Aide-mémoire. If any step in the list is unclear, then **non-intervention** is the safest approach until more information is available to ensure a safe response.

Note: When using the Aide-mémoires, if at any step of a response conditions change or new information arises, it is a good idea to go back to Step 1 to make sure all important elements have been considered. This form is meant to be flexible.

Initial considerations

This section contains a list of the most important elements that should be considered before planning a response. The list presents the most important hazards, concerns or issues when responding to the specific class of dangerous goods. It does not list all the hazards. Once the specific dangerous goods have been identified, more information can be found in the ERG, the Safety Data Sheet (SDS), or through CANUTEC.

CANUTEC

This box contains CANUTEC's telephone numbers. CANUTEC can be called at any point during any step of an incident involving dangerous goods.

Step 1: Do not rush

This section lists the elements to think about **before** arriving to the site of an incident. The priority should be keeping both first responders and the public safe. Make sure to keep a safe distance, approach from uphill and upwind where possible and avoid contact with any vapours, fumes, spills and site safety hazards.

Always consider: *What if we don't know if dangerous goods are involved?* The answer: Always consider it a possibility and be ready, just in case.

Some situations may involve dangerous goods, but may not be obvious at first. These could include when:

- Trucks or railcars carrying dangerous goods have no placards or don't have the correct dangerous goods placards
- There is poor visibility or when the placards are the same colour as the trailer or railcar
- Placards aren't visible, for example, when snow has covered them
- A truck or railcar is not properly placarded on four sides and is laying on the side that has the placard

If dangerous goods are involved, regardless of the type it's critical to wear personal protective equipment (PPE). First responders should be familiar with the level of protection that the PPE can offer. For example, with standard fire-fighting response PPE, bunker gear offers limited skin protection against the hazards from toxic or corrosive vapours, fumes or gases, but the self-contained breathing apparatus (SCBA) can protect the respiratory system against those same hazards.

Questions to consider regarding Step 1:

- **Could** dangerous goods be involved and which dangerous goods?
    - The placards may not be visible, or missing due to the impact.
    - Trucks or railcars may not have the right placards.

- What **amount** of dangerous goods could be involved in this incident?
    - Tanker trucks of flammable liquids carry approximately 38,000 litres when full and a rail tank car carries approximately 100,000 litres when full.
    - A tractor-trailer can carry various quantities of dangerous goods in different sizes of means of containment (mixed loads).

- What is the **terrain** of the area surrounding the incident? What is the wind direction? Where can first responders approach safely from uphill and upwind where possible?
    - Make sure to get information on the topography as well as the wind direction so that it is easier to plan an approach.

- What are the **hazards** of the dangerous goods involved and what is the risk of each hazard?
    - At this initial stage, the **Guide number** provided in the Aide-mémoire for the **ERG** may be the quickest way to access the information. **CANUTEC** can also provide assistance during any step of an incident involving dangerous goods.

- What kind of **PPE** is available to the crew?
    - If dangerous goods are involved, regardless of the type it is critical to wear personal protective equipment (PPE). First responders should be familiar with the level of protection that the PPE can offer and its limitations.

- What **gases** are the detectors capable of measuring?
    - First responders should be familiar with detection equipment, its limitations and the necessary correction factors.

Step 2: Secure the scene

Isolate the area and secure the perimeter by limiting access to the area surrounding the incident. For a rail incident or a road incident close to a railway, it is important to contact the Rail Traffic Control Centre so that they can close rail traffic. If this is not done, trains could approach at any moment and because trains are not easily stopped, this could make the situation even worse.

Step 3: Identify the hazards and assess the situation

When dealing with a dangerous goods incident, the safest approach is to **wait** until the information and the resources needed to respond safely are available. Information that should be gathered by observing from a safe distance and, if available, from the shipping document is listed in this section. Shipping documents can be found:

- For **road**, the shipping document is usually located in the **power unit**. It could also be in a **waterproof receptacle** on the trailer, for example if the cargo unit has been disconnected from the power unit in an unsupervised area.

- For **rail**, the shipping document is usually with the **train crew**. It could also be in the **first locomotive**, if no member of the train crew is present.

- For **marine**, the master of the vessel will have the shipping document available on or near the **bridge of the vessel**.

The shipping document will provide the details on each product transported including: the UN number, the name of the dangerous goods, the quantity transported and the means of containment.

Once the dangerous goods are identified, more information on the specific hazards for each product can be gathered and an evaluation of the other hazards present at the scene can be performed.

Hazards could include:

- **Chemical hazards** – the result of contact with a product (includes decomposition, reaction, combustion) by routes of entry, such as inhalation, ingestion or skin contact
- **Physical hazards** – level of light, noise, temperature, pressure
- **Safety hazards** – projectiles, fires, explosions, unstable loads or hazards related to mechanical equipment
- **Site safety hazards** – electrical lines, pipelines, bent rails

Once information on the hazards has been obtained at the scene the isolation zone can be reviewed according to the new information collected.

Step 4: Get help

When dangerous goods are involved, extra help may be needed. Different levels of assistance are available and important information can be found on the **shipping document**.

1. The **24-hour telephone number** is where the consignor can be reached to get technical information about the dangerous goods in transport. The line may be answered by CANUTEC or someone who can provide technical information. Anyone can call this telephone number, free of charge.

2. For some higher-risk dangerous goods, an Emergency Response Assistance Plan (ERAP) may be required. If a shipment requires an ERAP, the shipping document will show the plan's reference number (2-XXXX-YYY) and the ERAP telephone number.
    a. The **ERAP telephone number** is an emergency number where technical and emergency response advice is provided as soon as possible by the person who has the ERAP.
    b. This **person** is an expert in the dangerous goods and means of containment that require the ERAP and can provide assistance on actions to be taken to respond to a release or anticipated release. They can help by implementing their plan and sending emergency response resources to the incident site.
    c. **Anyone** can call the ERAP telephone number.

3. If the shipping document is not available, if the information is not legible or if it is unclear what is written, **CANUTEC** can provide assistance in finding the right contacts and help with communication between multiple organizations.

The larger the incident, the more organizations that will be involved. Good coordination and organization are the keys to making the response safe and efficient. Working with other organizations under an incident command structure is the best way to coordinate the response.

Step 5: Respond

Before responding it is important to review the critical considerations, confirm the information and coordinate all resources. The response actions taken should take into account the capabilities of the resources on site. Defensive and offensive operations should only be attempted when it is safe to do so, and when the appropriate resources are on site. Until then, **non-intervention** is the safest approach.

Once a response has been put in place, it needs to be re-evaluated when the conditions of the incident change, including progress made by the response teams, change in weather, new hazard presents itself, etc.

Section 2: Dangerous Goods Incident Worksheet

The Dangerous Goods Incident Worksheet works hand-in-hand with the Aide-mémoires for First Responders. It contains the same five key steps as the Aide-mémoires and provides a **template** to collect all the important information at any step of an emergency situation involving dangerous goods. Make sure to use it on-site of an incident with the Aide-mémoires.

Dangerous Goods Incident Worksheet

Step 1: Do not rush - Initial incident details				
Time and location	Date		Location of incident	
	Time activated			
	Time on site		Location of Incident Command Post	
	Time left site			
Weather at incident site	Time	Wind speed and direction	Temperature (°C)	Other information (e.g. initial isolation perimeter, conditions)
Notes				

Step 2: Secure the scene - Contacting local authorities and the carrier				
Local authority	Organization		Name/position	
	Telephone		Email	
Carrier information	Organization		Name/position	
	Telephone		Email	
Rail incident: Has the Rail Traffic Control Centre been contacted to ensure any rail lines are shut down?				
Rail Traffic Control Centre	Name		Position	
	Telephone		Email	

Step 3: Identify the hazards and assess the situation - From a safe distance			
Signs	Fire	Smoke	Fumes
	Leaks	Spills	Vapours
Container damage	Risks of:	Heat Induced Tear(s)	BLEVE(s)
Site safety hazards	Electrical lines	Pipelines	Bent rails
Is the shipping document available?			
Log the dangerous goods on next page			

Step 3: Identify the hazards and assess the situation (continued)

Is the shipping document obtained? yes / no

	Container ID	UN#	Class	Shipping name	ERG Guide	Hazards	Evacuation distance (m)	
							Initial	Fire
Dangerous goods								

Is an evacuation required? Does the initial isolation zone need to change?

Time	Evacuation/shelter in place, distance (m) and details

Monitor any changes in the situation

Start the incident layout – Draft below or use the space in Step 5 on last page

Initial incident layout / notes	Containers, location, wind direction

Step 4: Get help – Communicate, inform and prepare to coordinate resources				
Have they been contacted: CANUTEC / 24-Hour number or ERAP telephone number?				
CANUTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cell phone				
Units responding	Unit ID	Origin	Position under IC	
Resources	Organization	Origin	Personnel / equip.	Position under IC
Contact information	Name	Organization	Cell phone number	Email address

Step 5: Respond – Incident size up and strategy employed	
Incident layout	Container(s), location, safety zones, wind direction, etc.

Have all the critical considerations been included in the assessment?			
Are all the resources part of a timely, appropriate, safe and coordinated (TASC) response?			
Strategy	Non-intervention	Defensive	Offensive
Notes on strategy			
Other important information			
Has the plan been implemented successfully? Has progress been made?			
Reassess / Modify the Incident Action Plan			

How to use the Dangerous Goods Incident Worksheet

This worksheet complements the Aide-mémoire for first responders. By following the five key steps, it allows the Authority Having Jurisdiction or Community Officials to **gather and record** information about the:

- **Initial details** of the incident that can be communicated to the carrier, the shipper and response organizations
- **Weather conditions** and how they could affect the response
- **Means of containment**, using the identification marks, initials and numbers
- **Hazards** presented by the dangerous goods or the incident site
- **Carrier**, the **shipper**, the **response organizations**, **local authorities** and other **participants**
- Response **strategies** and details of the **Incident Action Plan**

Step 1: Do not rush

This box is where the emergency planner or scribe for the incident would outline the **initial details** of the incident including when the first notification went out, the location of the incident, the arrival of the first unit on scene, the initial details of what is involved and any information on the weather and terrain at the incident site.

Example:

Step 1: Do not rush - Initial incident details				
Time and location	**Date**	*January 1st 2019*	**Location of incident**	*Crossing Number 123456 (Clark Road Crossing)*
	Time activated	*03:00*		
	Time on site	*03:30*	**Location of Incident Command Post**	*Corner of Road 22 and Road 11, with uphill vantage point.*
	Time left site	*TBD – still on-going*		
Weather at incident site	**Time**	**Wind speed and direction**	**Temperature (°C)**	**Other information (e.g. initial isolation perimeter, conditions)**
	03:00	*10 km/h out of the NW*	*-17*	*It is a level crossing and there should be no issues with access*
	03:30	*15 km/h out of the NW*	*-20*	*Icy conditions at the site*
Notes	*Train collided with a truck at a level crossing and has derailed a number of rail cars. Dangerous goods involved. No information on casualties.*			

Step 2: Secure the scene

This is where the information on the **local authority** and **carrier (or carriers)** should be documented.

Example:

Step 2: Secure the scene – Contacting local authorities and the carrier				
Local authority	**Organization**	*RCMP*	**Name/position**	*Lt. Dave Smith*
	Telephone	*1-123-456-7890*	**Email**	
Carrier information	**Organization**	*123 Rail Inc.*	**Name/position**	*Conductor – Lawrence Jameson*
	Telephone	*1-888-123-RAIL* *1-987-654-3210*	**Email**	
Rail incident: Has the Rail Traffic Control Centre been contacted to ensure shut down of the rail line(s)?				
Rail Traffic Control Centre	**Name**	*John Smith*	**Position**	*Rail company advisor*
	Telephone	*123-456-7891*	**Email**	

Step 3: Identify the hazards and assess the situation

Information on the **hazards** should be documented here. List the dangerous goods involved in the incident, including the ERG Guide reference and the recommended evacuation distance, so that the information can be given quickly to other first responders when they arrive.

Record any ordered evacuations and their time, as well as a draft layout of the incident in this section.

Example:

Step 3: Identify the hazards and assess the situation - From a safe distance			
Signs	Fire	**Smoke**	Fumes
	Vapours	Leaks	Spills
Container damage	Risks of:	Heat induced tear	BLEVE
Site safety hazards	**Electrical lines**	Pipelines	**Bent rails**

Is the shipping document obtained? yes / no									
Dangerous goods	**Container ID**	**UN#**	**Class**	**Shipping name**	**ERG Guide**	**Hazards**	**Evacuation distance (m)**		
							Initial	**Fire**	
	UUGX7801	*1267*	*3*	*Petroleum Crude Oil*	*128*	*Flammability*	*300*	*800*	

	NOFX1234	*1202*	*3*	*Diesel Fuel*	*128*	*Flammability*	*300*	*800*
	TTHX1138	*1789*	*8*	*Hydrochloric Acid*	*157*	*Corrosivity*	*50*	*800*
	DCJX0477	*1075*	*2.1*	*Liquefied Petroleum Gases*	*115*	*Flammability*	*800*	*1600*

Step 4: Get help

This section is where the emergency planner or scribe would **list** the emergency response units that are responding to the incident, and show where they've been assigned under the **Incident Command (IC)** structure. It can also be used to list the contact information for both those on site, as well as those who aren't present but are still relevant to the **Authority Having Jurisdiction (AHJ)** for response.

Example:

Step 4: Get help – Communicate, inform and prepare to coordinate resources				
Have they been contacted: CANUTEC / 24h Emergency number or ERAP telephone number?				
CANUTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or *666 on a cellular phone.				
Units responding	**Unit ID**	**Origin**	**Position under IC**	
	Fire 1	*Jonesville FD*	*Incident Commander*	
	Pumper 1	*Jonesville FD*	*Operations ER Branch, Fire Suppression Division*	
	Pumper 2	*Jonesville FD*	*Operations ER Branch, Confinement Division*	
Resources	**Organization**	**Origin**	**Personnel and equip**	**Position under IC**
	ERAP Team 1	*Closest City*	*48 feet trailer, pumps, hoses, PPE*	*Operations ER Branch, Response Operations Division*
	Rail Team 1	*Big City*	*Wrecking equipment*	*Operations ER Branch, Response Operations Division*
	ERAP Team 2	*Further City*		*En route to incident site – Not yet assigned*
Contact information	**Name**	**Organization**	**Cell phone number**	**Email address**
	Chief Wilson	*Jonesville Fire Department*	*1-987-123-4567*	*chief@jonesvillefd.com*
	Deputy Chief Brown	*Jonesville Fire Department*	*1-987-654-1234*	*deputychief@jonesvillefd.com*
	William Smith	*Technical Advisor for Big Petro Inc.'s ERAP*	*1-587-789-0012*	*Will.smith@bigpetro.com*
	Virgil Hilts	*HazMat Responders 123, Team Leader for Big Petro Inc.'s ERAP*	*1-587-998-1875*	*vhilts@hazmat123.com*

Step 5: Respond

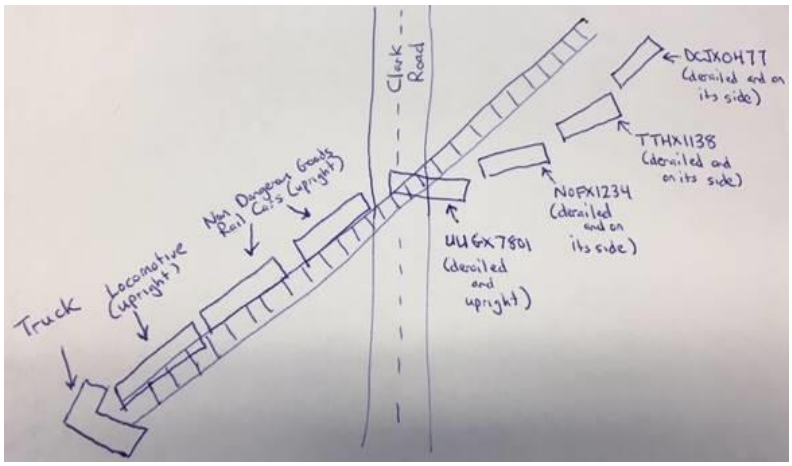
The emergency planner or scribe should use this section to draw a simple **diagram of the scene**. It should show the wind direction and the location of any means of containment or exposures that are important to the response.

Below the diagram, this section should include which **strategy** the Authority Having Jurisdiction (AHJ) is using and any details on the response.

It should also be used to make **notes** on things that are relevant to the response that haven't been covered yet on this form. This information could relate to the:

- **dangerous goods** themselves
- available **resources**
- government **agencies**
- **logistics** or **planning**
- **documentation**
- whatever is deemed **important** by the scribe or the AHJ/IC

Example:

Step 5: Respond - Incident size up and strategy employed			
Incident layout	**Container(s), location, safety zones, wind direction, etc.**  		
Have all the critical considerations been included in the assessment?			
Are all the resources part of a timely, appropriate, safe and coordinated response?			
Strategy	**Non-intervention**	**Defensive**	**Offensive**
Notes on strategy	*Defensive strategy employed with local fire teams ensuring spilled dangerous goods are contained. Waiting on arrival of resources from rail and the ERAP before reassessing the strategy.*		

Other important information	• *The Emergency Operations Center (EOC) will be set up at the Community Center* • *SDS are available for all dangerous goods involved and have been given to the Safety Officer* • *Yum Yum Caters will be providing food for all response personnel starting at 12:00* • *Transport Canada has made a request that CANUTEC be updated on the progress of the response before the start of the next operational period* • *Jamesville Fire Department will make their resources available, if needed, through the Mutual Aid Agreement between Jamesville and Jonesville* • *The Walmart parking lot to the north of the incident site on Park Avenue will be used at a staging area* • *The Mayor will be giving a press conference at 14:00 at the EOC and wants an update by 13:00 on the progress of operations.*

Section 3: Dangerous Goods Incident Pre-Plan Worksheet

This worksheet helps to identify the dangerous goods moving through the community and available resources to better prepare a response to an incident. The worksheet should be used as a template for pre-planning a response to an incident.

The main steps of **pre-planning** are:

1. **Conducting a hazard identification and risk assessment (HIRA)** for dangerous goods by identifying the carriers that go through the community and the dangerous goods that they transport.
2. **Identifying the community's response resources**, including mutual aid agreements with other organizations.
3. **Networking** with carriers, shippers and response organizations to gauge their respective response capabilities.
4. **Developing the knowledge and skills** so that local response organizations can respond to incidents.

Identifying carriers and dangerous goods that go through the community will take time. Rail carriers are the easiest to identify and information on volumes is available through CANUTEC upon request by community emergency planning officials under Protective Direction 36.

For all other modes of transport, emergency planning officials can start by contacting the manufacturers, transport companies and terminal facilities in the area.

Transport companies should be able to give a **general overview** about what they're transporting including the amount of material and the routes that they typically use. They will welcome the outreach. To find out about the other dangerous goods in transit through a jurisdiction, observing and taking notes of carriers' names and dangerous goods placards may allow emergency planning officials to contact these transport companies directly to find out what dangerous goods companies ship with them and the nature of the dangerous goods.

Dangerous Goods Incident Pre-plan Worksheet

1. Fire Department/ Municipality	

	Mode: rail, road, marine, air	Carrier's name	Contact name	Non-emergency phone number	Emergency phone number
2. Carriers that transport dangerous goods					

	Organization	Contact name	Non-emergency phone number	Emergency phone number
3. Local and mutual aid resources				

	Mode	UN Number	Class	Shipping Name	ERG Guide	Notes (e.g. level of hazard, estimated volume, frequency of shipment)
4. Dangerous goods moving through the community						

5. Map of the area	

How to use the Dangerous Goods Incident Pre-plan Worksheet

The Dangerous Goods Incident Pre-Plan Worksheet will help when planning ahead, so as to be prepared if an emergency happens.

Section 1: Fire Department/Municipality

This box is where the emergency planner lists their municipality and all the fire departments within their jurisdiction.

Example:

1. Fire Department/ Municipality	*Breslow County Fire Department, City of Garrison Fire Department / Breslow County*

Section 2: Carriers that transport dangerous goods

This section is where the emergency planner will fill in specific information for all the **carriers** of dangerous goods that travel through their jurisdiction.

- **Mode** refers to the type of transportation the carrier uses. For example: road or rail. A carrier may use more than one mode.
- The **carrier's name** is the carrier's legal name or the name that they use to do business.
- The **contact name** is the person working for the carrier who can be easily reached in case of emergency. They should know about the carrier's fleet and the dangerous goods that are being transported.
- The **non-emergency phone number** is the office or cell phone number for the contact.
- The **emergency phone number** is the after-hours phone number where the contact can be reached directly as such. This could be a cell phone, or an indirect line, such as a call centre.

Example:

2. Carriers that transport dangerous goods	**Mode: rail, road, marine, air**	**Carrier's name**	**Contact name**	**Non-emergency phone number**	**Emergency phone number**
	Road	*Number 1 Trucking Ltd.*	*Robert Paulson*	*1-975-578-0546*	*1-888-NUMBER1*
	Rail	*123 Rail Inc.*	*Tyler Durden*	*1-987-456-7098*	*1-888-123-RAIL*

Section 3: Local resources and mutual aid

This section is where the emergency planner should list all the organizations in the area that have agreed to help in case of incidents involving dangerous goods.

- The name of the organization goes in the **organization** column, and could include:
    - trade organizations
    - responsible CAER (Community Awareness and Emergency Response) groups
    - members of industry
    - other first responders from nearby communities
- The **contact name** is the person working for an organization who can be reached easily in case of emergency. They should know about the means of containment and the dangerous goods that are being transported. They may also have access to resources that would help in a response.
- The **non-emergency phone number** is the office or cell phone number for the contact.
- The **emergency phone number** is the after-hours phone number where the contact can be reached directly as such. This could be a cell phone, or an indirect line, such as a call centre.

Example:

3. Local and mutual aid resources	**Organization**	**Contact name**	**Non-emergency phone number**	**Emergency Phone number**
	North Haverbrook CAER Group	*Lyle Lanley*	*1-867-543-2100*	*1-888-NHCAER1*

Section 4: Dangerous goods in transport through the community

This section is where the emergency planner should **list** all the dangerous goods that are moving through their community, and the related Response Guide in the ERG.

- In the **mode** column, note what mode(s) of transport is moving each dangerous good.
- Write the unique four-digit identifier of each dangerous good in the **UN Number** column.
- The **class** refers to the primary class of each dangerous good, and includes any subclasses in parentheses. Classes for each dangerous good can be found in the Schedule 1 of the TDG Regulations.

- The **shipping name** refers to the name commonly used when shipping a dangerous good with that UN number. The shipping name can be found in the Schedule 1 of the TDG Regulations, and other shipping names can be found in the ERG.

- The **ERG Guide** refers to the relevant Response Guide from the Emergency Response Guidebook.

- The **notes** column is where the emergency planner can note any other important information. This could include:

    - which **carriers** are transporting dangerous goods
    - where the dangerous goods are being **shipped** to or from
    - how **often** shipments happen
    - the **volume** of a typical shipment
    - the **means of containment** that is typically used
    - whether or not the dangerous good may require an **Emergency Response Assistance Plan (ERAP)** while in transport
    - the roadway/railway/waterway **where** the dangerous goods are being transported

Example:

	Mode	UN number	Class	Shipping name	ERG Guide	Notes (e.g. level of hazard, estimated volume, frequency of shipment)
4. Dangerous goods moving through the community	*Road*	*1203*	*3*	*Gasoline*	*128*	*High hazard, high volume, daily shipments of tanker TC-406 from various carriers to deliver to Northern communities through town on Highway 14, requires ERAP only by rail.*
	Rail and Road	*1267*	*3*	*Petroleum Crude Oil*	*128*	*Requires an ERAP if shipped by rail. Carried by 123 Rail Inc. in DOT117A100W1 rail tank cars by rail (96,528 L volume)* *Carried by Peppy Petroleum Products Ltd. in DOT 406 tank trucks by road (34,068 L volume)*

Section 5: Map of the area

This section allows the emergency planner to add a **map** to the planning document. This map could show **locations** where dangerous goods are being moved to or from. It could also show where the **resources** from previous sections are located. This section can be tailored to meet the needs of the area.

Example:

The following map shows the locations of fire stations in downtown Ottawa.

5. Map of the area