

Dangerous Goods Incident Support Plan

2015

ALBERTA TRANSPORTATION



Government of Alberta ■
Alberta Emergency Management Agency

August 2015

Alberta Dangerous Goods Incident Support Plan

Acknowledgements

The Dangerous Goods Incident Support Plan has been drafted by Alberta Transportation (AT) in conjunction with Alberta Environment and Parks (EP) and Alberta Emergency Management Agency (AEMA) as per the 2009 Alberta Emergency Plan (AEP).

AEMA will act as the coordinating agency and provide support and assistance for the Government of Alberta response as per the *Government Emergency Management Regulation* (AR 248/2007).

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Alberta Dangerous Goods Incident Support Plan

Record of Amendments

Amendment Number	Date Amended	Amended By (please print)	Initials
2011-01	December 2011	Gordon BEAGLE	GJB
2013-02	August 2013	John Evans	JAE
2015-03	August 2015	Daniel Howlader	DH

Alberta Dangerous Goods Incident Support Plan

Foreword

Thousands of tons of dangerous goods are manufactured, stored, transported, and handled daily within the Province of Alberta. These dangerous goods are located throughout the province and involve a number of modes of transportation. Unfortunately, a dangerous goods incident does occur on occasion, at an industrial site, storage facility or within the transportation system. When these incidents do occur, a provincial response may be required, and the Dangerous Goods Incident Support Plan is intended to guide that response.

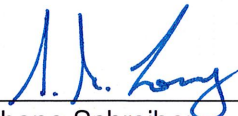
The aim of this plan is to detail:

- The coordinated cross-governmental response to prevent the loss of life, lessen, or mitigate property damage and to protect the environment.
- An understanding of the responsibilities of the various organizations involved in a dangerous goods response.

Incidents involving dangerous goods often require responders with specialized training, equipment, and knowledge. It is the coordinated response of the Government of Alberta with cooperation from the public and private sector, which brings together the resources and expertise necessary for a successful response.



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Alberta Transportation



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October 2, 2015
Date

August 13, 2015
Date

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Alberta Dangerous Goods Incident Support Plan

Introduction and Background

Dangerous goods (DG) are solid, liquid, or gaseous materials that could cause harm to human beings, property, the environment, or the economy. Thousands of tons of dangerous goods are manufactured, stored, and transported throughout the province on a daily basis. Incidents involving dangerous goods do occasionally occur at industrial sites, storage facilities, or within the transportation system, and it is essential that the public, property, and the environment be protected from the adverse effects of these incidents. In order to minimize the impact from a dangerous goods event, it is essential that the response be carried out in a timely, coordinated, and effective manner. This plan will provide the coordinated Government of Alberta (GOA) response to dangerous goods incidents.

Municipalities in Alberta maintain all-hazard or hazard-specific emergency plans for responding to both natural and technological emergencies. Some dangerous goods require an Emergency Response Assistance Plan (ERAP), as detailed in the Federal *Transportation of Dangerous Goods Regulations*, to be established before they can be moved. Most carriers of dangerous goods have internal emergency response capability, or have access to private response contractors.

As a dangerous goods incident will most likely involve a private company and a municipal response, partnerships are essential in mitigating and managing the event. Many dangerous goods incident responses require specialized knowledge and equipment, necessitating that those partnerships are forged and maintained prior to transportation or storage of dangerous goods. Once the Dangerous Goods Incident Support Plan (DGISP) is activated, a coordinated, timely response from the GOA involving all parties is required to safely mitigate and manage the event.

1.2 References

1.2.1 Statutes

Dangerous Goods Transportation and Handling Act (RSA 2000, c D-4)
Emergency Management Act (RSA 2000, c E-6.8)
Environmental Protection and Enhancement Act (RSA 2000, c E-12)
Explosives Act (R.S.C. 1985, c. E-17)
Freedom of Information & Protection of Privacy Act (RSA 2000, c F-25)
Nuclear Safety and Control Act (S.C. 1997, c. 9)
Transportation of Dangerous Goods Act (S.C. 1992, c. 34)

1.2.2 Regulations

Dangerous Goods Transportation and Handling Regulation (AR 157/1997)
Government Emergency Management Regulation (AR 248/2007)
Transportation of Dangerous Goods Regulations (SOR/2001-286)

1.2.3 Plans

Alberta Emergency Plan (AEP)
Alberta Petroleum Industry Incident Support Plan (PIISP)

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1.3 Acronyms

Acronym	Full Spelling
AEMA	Alberta Emergency Management Agency
AER	Alberta Energy Regulator
AEP	Alberta Emergency Plan
AH	Alberta Health
AT	Alberta Transportation
CANUTEC	Canadian Transport Emergency Centre
CI	Critical Infrastructure
CIC	Coordination and Information Centre
CMO	Consequence Management Officer
DG	Dangerous Goods
DGI	Dangerous Goods Incident
DGISP	Dangerous Goods Incident Support Plan
EP	Alberta Environment and Parks
ERAP	Emergency Response Assistance Plan
FOIP	Freedom of Information & Protection of Privacy Act
GOA	Government of Alberta
JSG	Justice and Solicitor General
MOC	Means of Containment
NGO	Non-Governmental Organizations
PAB	Public Affairs Bureau
PIISP	Petroleum Industry Incident Support Plan
POC	Provincial Operations Centre
PPE	Personal Protective Equipment
RP	Responsible Party

The Plan

2.1 Aim

The aim of the Alberta DGISP is to detail the coordinated cross-governmental response to a dangerous goods incident, in addition to defining the responsibilities of the various organizations involved in the incident response.

2.2 Objectives

- Ensuring public safety and security.
- Lessening or mitigating property damage.
- Protecting the environment.

2.3 Assumptions of the Government of Alberta

- The responsibility for emergency planning, response, and clean-up of any dangerous goods incident rests with the person or company who owns the product, or is in charge of the production, storage, transportation, or handling of the product. This individual or company is generally from the private sector, and is referred to as the Responsible Party (RP). It is assumed that the RP will make an attempt at a clean-up in conjunction with regulatory oversight organizations and other interested parties should any dangerous goods incident occur.
- Facility operators and carriers that manufacture, store, handle, or transport dangerous goods will consult with the local authority concerning their activities, product, and response capabilities prior to the manufacture, storage, handling, or transportation of these goods.
- Local authorities are the first level of government in Alberta to respond to dangerous goods incidents, and the use of resources external to the local authority will only be requested when the local authority cannot resolve the incident with integral resources.

2.4 Plan Limitations

- This Plan does not apply to those dangerous goods incidents related to oil and gas pipelines. Incidents under the jurisdiction of the Alberta Energy Regulator (AER) are covered under the PIISP and may be resolved in conjunction with this Plan depending upon the circumstances of the incident.
- This Plan does not apply to human induced intentional dangerous goods incidents. In those situations, the Alberta Counter Terrorism Crisis Management Plan will apply.
- Initial response can be limited by resource availability and location, and guided by expertise from a variety of sources in both the public and private sectors. The availability of these resources to respond in a timely manner may limit the GOA's ability to respond effectively in the short term.

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2.5 Dangerous Goods Impact Levels

For the purposes of the DGIISP, the following levels and descriptions will be used to identify the impact of a DGI. The levels described below are independent of POC or CIC elevations, which are determined by the nature of the event using different criteria.

	Level One	Level Two	Level Three	Level Four
	No injuries or environmental impact, cleanup is short term or already completed	No expected risk to public, environmental risk is minor	There is a risk to people and/or property and/or the environment	There is a serious threat to people, property and/or the environment
Spill and/or Product Involved	<ul style="list-style-type: none"> - Non-reportable - Late report where the incident occurred several days before and there are no adverse effects (cleanup completed) 	<ul style="list-style-type: none"> - Minor* - Late report where incident happened within the last couple of days and cleanup is still ongoing - May be activated 	<ul style="list-style-type: none"> - Major** - Anything involving Class 7, Radioactives 	
ERAP			<ul style="list-style-type: none"> - Should be/is activated 	<ul style="list-style-type: none"> - ERAPable*** product leaking and there is a serious threat to public safety
Means of Containment (MOC)	<ul style="list-style-type: none"> - No damage 	<ul style="list-style-type: none"> - Minor or possible damage (i.e. "soft" roll over) - Inspector's Direction required 	<ul style="list-style-type: none"> - Significant damage - Anything involving a fire 	
Traffic, evacuations, injuries	<ul style="list-style-type: none"> - No traffic impact 	<ul style="list-style-type: none"> - Traffic may be/is impacted 	<ul style="list-style-type: none"> - Highway closed - Injuries sustained and possible fatalities - Possible evacuations 	<ul style="list-style-type: none"> - Evacuations
Rail	<ul style="list-style-type: none"> - Minor derailment where there is no DG involved and no crossings impacted 	<ul style="list-style-type: none"> - Derailment of DG cars, upright, no damage 	<ul style="list-style-type: none"> - Damaged DG rail cars, offloading required and/or spill - Transloading incident 	<ul style="list-style-type: none"> - Major derailment involving multiple cars, ERAPable product(s)
Other agency involvement	<ul style="list-style-type: none"> - No Fire Dept. or police involved 	<ul style="list-style-type: none"> - Fire Dept. and/or Police involved 	<ul style="list-style-type: none"> - Other GOA agencies responding (i.e. EP, AER, AEMA) 	<ul style="list-style-type: none"> - Multiple agencies involved including media - highly public incident
Notification and DG Inspector Response	<ul style="list-style-type: none"> - No DG Inspector/Duty Manager notification required (email incident report only) - No DG Inspector response required 	<ul style="list-style-type: none"> - Duty Manager during business hours or DG Inspector in the afterhours - DG Inspector response may be required - DG Inspector to contact scene 	<ul style="list-style-type: none"> - Duty Manager during business hours or DG Inspector and Duty Manager in the afterhours - DG Inspector response may be required 	<ul style="list-style-type: none"> - Duty Manager and DG Inspector notified - DG Inspector response required

*Reportable but localized and clean-up is short term. May have some impact, but can be remediated with little or no agency involvement.

Road closure may be required during response or cleanup.

**Involving a product where technical assistance is required (i.e. Large acid spill that isn't contained). Adverse effects to the environment i.e. waterways impacted. Major threat to the surrounding area.

*** ERAPable – Products that require as an Emergency Response Assistance Plan, as detailed in the Federal Transportation of Dangerous Goods Regulations.

Action Plan

3.1 General Concept

The GOA will execute a coordinated response to dangerous goods incidents when required, and the extent of the response will be tailored to the specifics of the event.

The DGISP relies heavily on the Responsible Party or Parties to take measures to protect the public and environment from the threat of a dangerous goods event, beginning with the requirement to report to any incidents to Alberta Transportation's Co-ordination Information Centre (CIC). An illustration of DGI reporting is located in Annex A.

The CIC operates 24 hours a day, 7 days a week to provide compliance, technical, and interpretive information to the public and industries on dangerous goods. The CIC is also an emergency response centre for all dangerous goods incidents, including managing of the calls from industry, and providing assistance to emergency response personnel at the incident site as required.

3.2 Lead Agency

Alberta Transportation is the lead agency for dangerous goods events, and will support the Responsible Party in its efforts to minimize the impacts to Albertans due to such events. Should the circumstances of the incident necessitate an alternate response, such as a significant impact to the environment or public safety, unified command between AT and a supporting organization will be established, these are detailed below in Section 3.8.

3.3 Supporting Agencies

Supporting agencies assist the Lead Agency in executing out the DGISP through their roles in a POC elevation and Alberta's public safety governance structure, or in DGI-specific tasks (which are detailed below), dependent upon the specifics of the event. The latter of these organizations may support the activities of the lead agency or agencies, or be in a unified command with AT.

3.4 Coordinating Agency

The Alberta Emergency Management Agency is the coordinating agency for the GOA and its emergency management partners. AEMA will assist the lead agency by facilitating the coordination of cross-GOA activities in support of the DGI response.

3.5 Other Interested Organizations

These entities have a minor interest in a dangerous goods event, and their involvement may be reasonably expected but cannot be confirmed or planned in advance of an incident. These organizations include but are not limited to federal, provincial, or municipal entities, private sector organizations, and community groups.

3.6 Tasks Common to all Agencies

3.6.1 General

- Be familiar with the Plan and associated assigned duties.
- Maintain currency of contact information.
- Be prepared to respond to the Plan at the Lead Agency's request.
- Recommend amendments to the Plan as required.
- Funds operational costs from its own budget.

3.6.2 During a Dangerous Goods Incident

- Gain and maintain situational awareness.
- Ensure information received, where applicable to the Plan or event and related decisions, is shared with the other agencies as required.
- Offer full cooperation to the lead agency and its appointed personnel.
- Maintain accurate documentation to meet the needs of legal concerns, Freedom of Information requirements, and government records management policies.
- Consequence Management Officers (CMOs) report to the POC as required.

3.6.3 After a Dangerous Goods Incident

- Participate in post-event review and provide recommendations to improve future responses.
- Propose amendments to the Plan as required.

3.7 Tasks for the Lead Agency

3.7.1 General

- Provide leadership to all affected departments in response to an event.
- Departmental communications staff to respond to all media inquiries.

3.7.2 Upon DGISP Activation

- Assign impact level of incident in consultation with relevant parties as required.
- Coordinate with the POC to determine level of government response.
- Develop key messages in coordination with the Public Affairs Bureau (PAB).

3.7.3 During a Dangerous Goods Incident

- Coordinate with and assist Responsible Party and affected local authorities as required through the CIC.
- Communicate technical and safety matters from the CIC to the POC as required.
- Appoint an onsite Incident Commander as required.
- Deploy technical experts and/or contractors to incident site as required.

3.7.4 After a Dangerous Goods Incident

- Coordinate post-event review.
- Implement amendments to the Plan as required.

3.8 Tasks for Specific Supporting Agencies

3.8.1 Alberta Energy Regulator (AER)

- Provide information and regulatory oversight when a DGI occurs at a regulated licensed facility such as a well-site.
- Provide information and regulatory oversight when a DGI occurs in transportation between two regulated licensed facilities.

3.8.2 Alberta Health (AH)

- Identify any public health risks due to DGI.
- Be prepared to exercise unified command with Alberta Transportation should the DGI have extensive public health impacts.

3.8.3 Environment and Parks

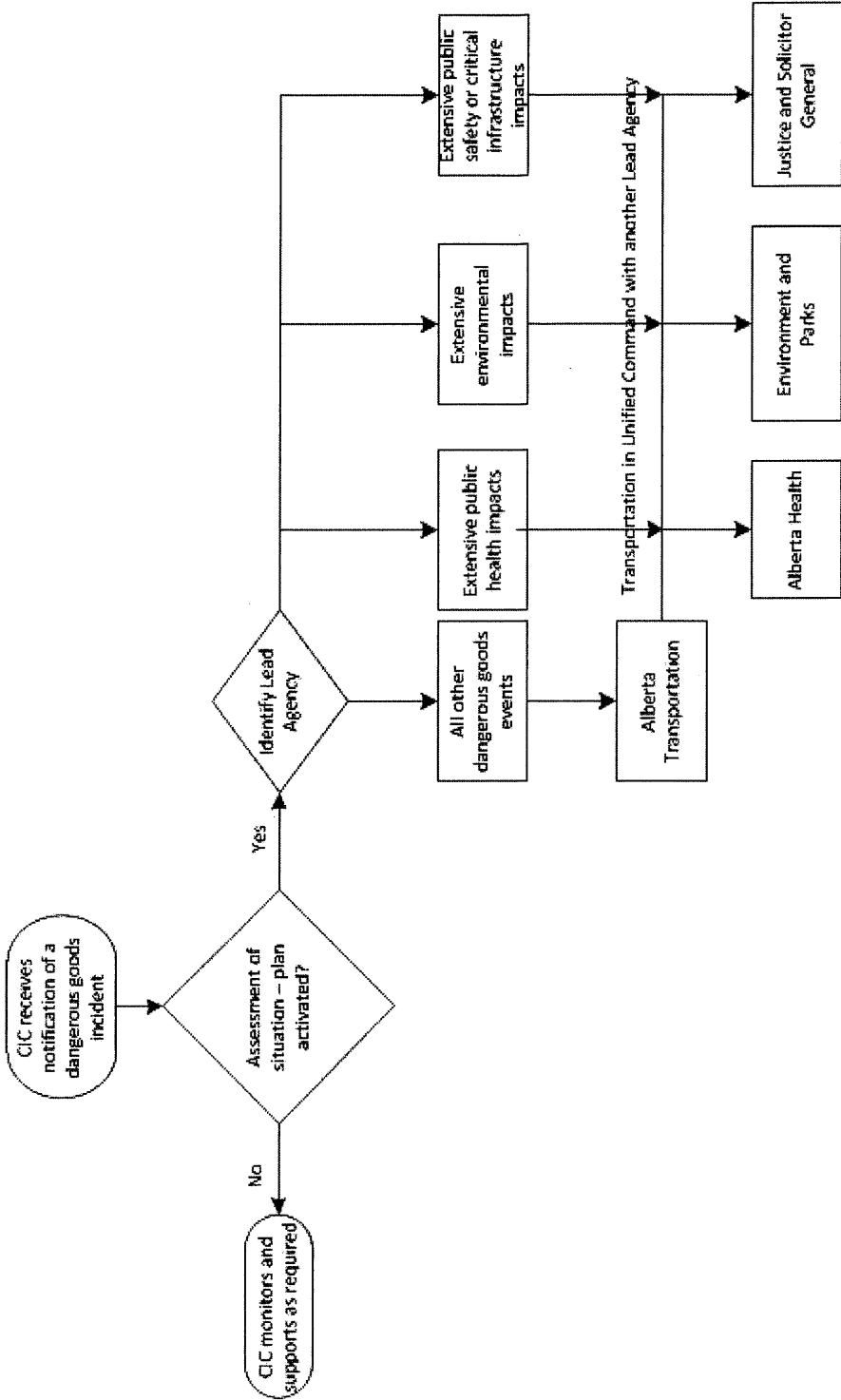
- Identify any environmental risks due to DGI.
- Be prepared to exercise unified command with Alberta Transportation should the DGI have extensive environmental impacts.

3.8.4 Justice and Solicitor General

- Provide legal advice to the GOA.
- Provide advice on the handling and dissemination or lack thereof of proprietary information to the Lead Agency.
- Identify any public safety or critical infrastructure (CI) risks due to DGI.
- Be prepared to exercise unified command with Alberta Transportation should the DGI have extensive public safety or CI impacts.

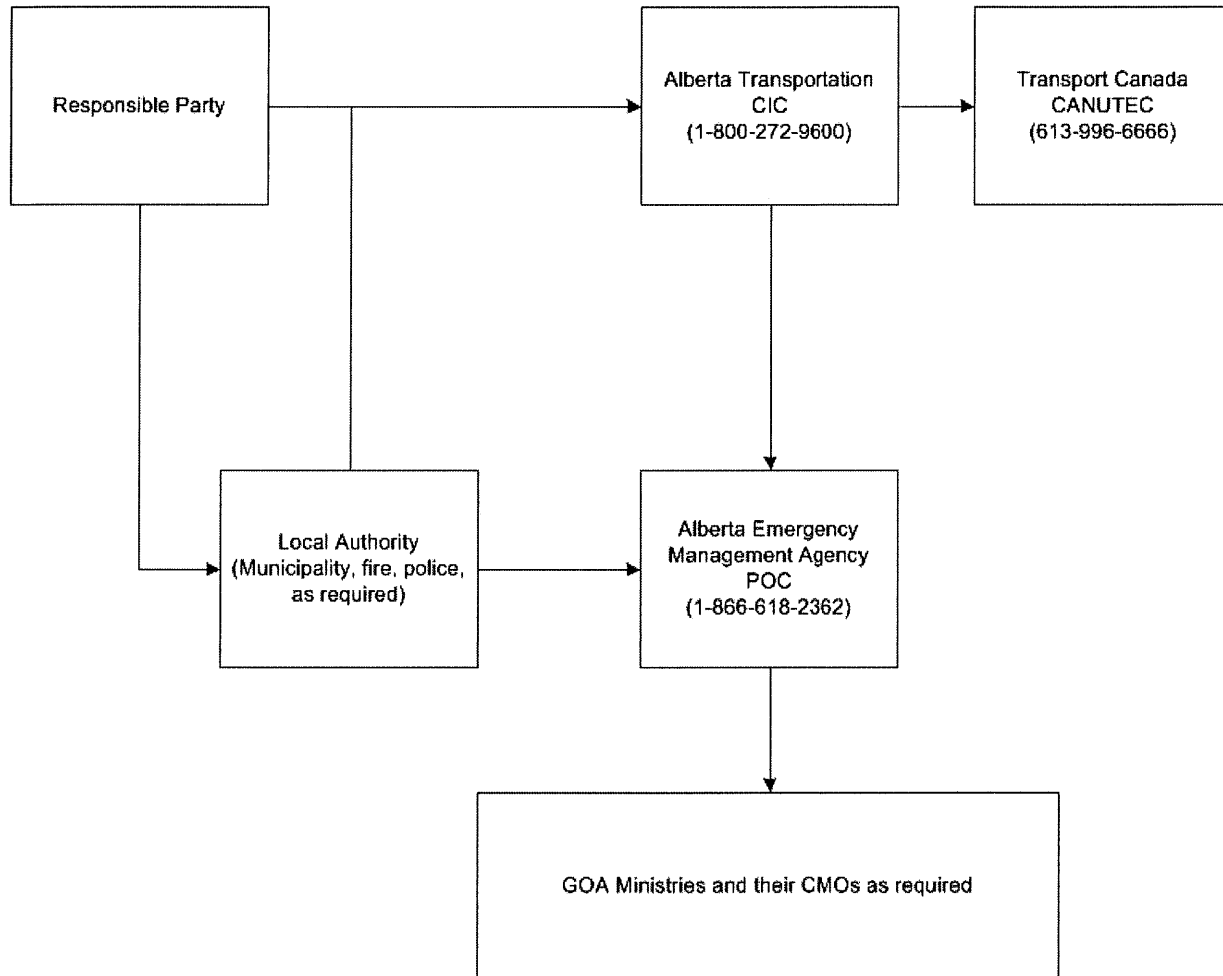
3.9 Decision and Lead Agency Chart

The chart below presents the decisions made by organizations listed through the Plan upon the receipt of a dangerous goods incident notification. It is intended to serve as a visual guide of the decisions and actions listed throughout the previous section.



Annex A – Dangerous Goods Events and Notifications

The diagram below outlines paths for dangerous goods notifications in Alberta, depending on the nature of the incident. In most cases, the notification process will conclude with the Alberta Transportation's CIC and the Canadian Transport Emergency Centre (CANUTEC). For more severe incidents, the CIC or a local authority will notify the POC. Should the incident be of sufficient scale to warrant an elevation of the POC, other GOA ministries and their CMOs will be notified based upon the nature of the incident.



Annex B – Hazard Classes

Dangerous goods are defined in Schedule 1 of the *Transportation of Dangerous Goods Regulations* (in accordance with Section 1(2) of the *Dangerous Goods Transportation and Handling Regulation*) and are grouped into nine hazard categories:

Class 1: Explosives

- 1.1 Explosive with a mass explosion hazard
- 1.2 Explosive with a projection hazard
- 1.3 Explosive with predominately a fire hazard
- 1.4 Explosives with no significant blast hazard
- 1.5 Very insensitive explosives, blasting agents
- 1.6 Extremely insensitive detonating articles

Class 2: Gases

- 2.1 Flammable gases
- 2.2 Non-flammable, non-toxic gases
- 2.3 Toxic gases

Class 3: Flammable and Combustible Liquids

Class 4: Flammable Solids, Spontaneously Combustible Materials, and Dangerous-when-Wet Materials/ Water reactive substances

- 4.1 Flammable solids
- 4.2 Spontaneously combustible materials
- 4.3 Water-reactive substances/Dangerous-when-wet materials

Class 5: Oxidizing substances and Organic Peroxides

- 5.1 Oxidizing substances
- 5.2 Organic peroxides

Class 6: Toxic substances and Infectious Substances

- 6.1 Toxic substances
- 6.2 Infectious substances

Class 7: Radioactive Materials

Class 8: Corrosive Materials

Class 9: Miscellaneous hazardous materials, products, substances or organisms

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Annex C – Personal Protective Equipment (PPE) Guidelines

Some dangerous goods incidents will require special equipment for personnel that are working at or visiting the incident site. This section is intended to provide an overview of those PPE requirements, and should be used as a guide, rather than as a substitute for a specific dangerous good's material safety data sheet.

In general, incidents that reach a level three or four dangerous good impact (as listed in Section 2.5) will require (at minimum) personnel visiting the spill site to be equipped with:

- A self-contained breathing apparatus
- Structural firefighter protective clothing

The table below refers to the defined hazard classes listed in Annex B, and the equipment suggestions beyond what is stated above. Evacuation distance is included to guide site visitors as to when the protective equipment may not be necessary.

Type of Dangerous Good	Suggested Additional Protective Equipment	Evacuation Distance
Class 1: Explosives	- No additional equipment	800m – 1600m
Class 2: Gases	- Thermal protective clothing	800m – 1600m
Class 3: Flammable and Combustible Liquids	- Thermal protective clothing	300m – 800m
Class 4: Flammable Solids, Spontaneously Combustible Materials, and Dangerous-when-Wet Materials/ Water reactive substances.	- Chemical protective clothing recommended by the manufacturer - Structural firefighter protective clothing is largely insufficient	500m – 800m
Class 5: Oxidizing substances and Organic Peroxides	- Chemical protective clothing recommended by the manufacturer - Structural firefighter protective clothing is largely insufficient	250m – 800m
Class 6: Toxic substances and Infectious Substances	- Self-contained breathing apparatus - Structural firefighter protective clothing provides limited protection for toxic substances	800m – 1600m
Class 7: Radioactive Materials	- Low to moderate level: No additional equipment - High level: Chemical protective clothing recommended by the manufacturer	100m – 300m
Class 8: Corrosive Materials	- Chemical protective clothing recommended by the manufacturer - Structural firefighter protective clothing is largely insufficient	800m – 1600m
Class 9: Miscellaneous	- Chemical protective clothing recommended by the manufacturer	800m – 1600m