

Province of B.C.

Ministry of Environment and Climate Change Strategy

Hazardous Waste Management Program

Guidelines for Preparing Contingency Plans for Carriers of Hazardous Waste

Version 2.2

January 2020

Table of Contents

Preface	3
I. Introduction	4
1. Purpose	4
2. Definitions	4
3. Simple Tips for a Better Contingency Plan.....	5
II. Contents of a Typical Contingency Plan.....	6
1. Policy Statement	6
2. Purpose and Scope.....	6
3. Elements of Emergency Planning.....	7
3.1 Identification of the Hazardous Waste(s) and the Hazard(s).....	7
3.2 Risk Identification.....	7
3.3 Legislation and Industry Standards.....	8
3.4 Emergency Organization and Responsibilities.....	9
3.5 Resources	9
3.6 Internal Notification.....	10
3.7 External Notification	11
3.8 Electronic Communications	11
3.9 Public Affairs	12
4. Emergency Response to Spills.....	12
4.1 Response Action Decision	12
4.2 Plan Activation and Response Mobilization.....	13
4.3 Response Action/Containment/Cleanup	14
4.4 Evacuation.....	15
4.5 Disposal of Spilled Contaminants and Debris	15
4.6 Site Restoration/Remediation	15
4.7 Post-Incident Evaluation	16
5. Training and Practice Drills	16
5.1 Training	16
5.2 Practice Drills.....	17
6. Plan Evaluation.....	17
7. Plan Updates	17
8. Record Keeping	18
9. Certification of the Contingency Plan	18
10. Appendices and Operational Guidelines.....	19
III Resources.....	20

Preface

This guidance document has been prepared specifically for carriers who intend to transport hazardous wastes in British Columbia. Carriers that apply for a licence to transport or handle hazardous wastes must prepare and submit a contingency plan describing how they will respond to potential emergencies involving the accidental release of hazardous waste or vehicle fuel into the environment.

The plan is technical in nature and should be prepared according to these guidelines. It is the responsibility of the carrier to ensure that the person preparing the contingency plan has the ability and capability to do so. **Those carriers who do not have someone qualified in their employment should engage the services of a person with the qualifications for preparing the contingency plan.**

A person qualified to prepare a contingency plan is:

1. Also known as a “qualified professional”, who
 - (a) is registered in British Columbia with the person's appropriate professional association, acts under that professional association's code of ethics and is subject to disciplinary action by that professional association, and
 - (b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within the person's area of expertise related to hazardous waste operations.
2. Or a person with **demonstrated** knowledge and experience with the hazardous wastes being transported, associated risks, and options for management of the wastes in an emergency.

A contingency plan should identify the substances being carried and their potential hazards, describe systems and other measures in place for preventing incidents, provide appropriate mechanisms for minimizing risk, loss and damage resulting from such incidents (i.e. reduce exposures to humans and the environment), and provide an incident management structure to guide response activities. The complexity or simplicity of a carrier's contingency plan is proportionally related to the type(s) of material transported, and the hazards associated with the material(s).

These guidelines will be periodically reviewed and amended by the Ministry.



TIP: Because of all of the built-in links, the usefulness of the references is maximized when this document is viewed on a computer connected to the internet.



DISCLAIMER

- Any reformatting of regulatory language is only intended to make the language easier to read.
- This document should not be used to determine compliance with any Act or regulation.
- This document is not a legal document. In all cases, provincial legislation (Acts and regulations) and other legislation take precedence.
- B.C. government expressly disclaims any liability or responsibility for loss or damage resulting from the use of this document or for the violation of any federal, provincial, or municipal law or regulation with which this document may conflict.

I. Introduction

1. Purpose

The primary purpose of these guidelines is to provide carriers of hazardous waste in the Province of British Columbia with guidance in the development of a Contingency Plan.

Provincial legislation pertaining to industry response planning includes the Environmental *Management Act* and the *Emergency Program Act*, and regulations thereunder. These guidelines are based on the B.C. Guidelines for Industry Emergency Response Plans prepared by the Ministry's Environmental Emergency Program.

Contingency plans should be structured around four major objectives:

- understanding the type and severity of potential emergencies (risk/exposures);
- establishing a high order of preparedness (equipment, personnel) commensurate with the risk;
- ensuring an orderly and timely decision-making and response process (notification, standard operating procedures), and
- providing an incident management organization with clear missions and lines of authority (president or safety officer, field supervision, driver).



NOTE: to provide consistency, clarity and fairness to all carriers, Ministry review of contingency plans will be based on this document, "Guidelines for Preparing Contingency Plans for Carriers of Hazardous Waste".

2. Definitions

Incident means an occurrence either human caused or by natural phenomena, that requires action by emergency service personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Contingency Plan means a detailed program of action to control and/or minimize the effects of an emergency requiring prompt corrective measures beyond normal procedures to protect human life, to minimize injury, to optimize loss control, and to reduce the exposure of physical assets and the environment to risks resulting from an incident.

Emergency means, in the context of these guidelines, an accidental situation involving the release or imminent release of hazardous waste that could result in serious adverse effects on the health and/or safety of persons or the environment.

Hazard means an event with a potential for human injury, damage to property, damage to the environment, or some combination thereof.

Hazardous Waste has the prescribed meaning from Section 1 of the [Hazardous Waste Regulation](#).

Risk means the chance of a specific undesired event occurring within a specified period or in specified circumstances. It may be either a frequency or a probability of a specific undesired event taking place.

Risk Identification means the identification of undesired events that lead to the materialization of a hazard, the analysis of the mechanisms by which these undesired events could occur and, usually, the estimation of the extent, magnitude, and likelihood of any harmful effects.

Risk Assessment means a quantitative estimation of the likelihood of undesired events occurring and the likelihood of harm or damage being caused by them, together with the value judgments made concerning the significance of the results.

Risk Frequency means the number of occurrences per unit of time.

Risk Management means the program that embraces all administrative and operational programs that are designed to reduce the risk of emergencies involving acutely hazardous materials. Such programs include, but are not limited to, ensuring the design safety of new and existing equipment, standard operating procedures, preventive maintenance, operator training, incident investigation procedures, risk assessment for unit operations, emergency planning, and internal and external procedures to ensure that these programs are being executed as planned.

Spill means a release or discharge into the environment, not authorized under the Act, of a substance listed in Column 1 of the Schedule in the [Spill Reporting Regulation](#) in a quantity equal to or greater than the quantity listed in Column 2 of the Schedule opposite that substance in Column 1.

3. Simple Tips for a Better Contingency Plan

- Number the pages in the document
- Add a table of content to make it easier for the reader to look for information, especially during an incident
- Where appropriate, use graphics to make it visually easier for the reader to find information and to illustrate key points. Examples of graphics are: flow charts, tables, figures, lists (bullets or numbers)
- Complete a spell check on the document
- Ask someone to proofread the document
- Ensure that applicable topics are covered in the contingency plan

II. Contents of a Typical Contingency Plan

When preparing a Contingency Plan using these guidelines, **it is important to note** that the simplicity or complexity of a plan is based on the type(s) of hazardous wastes being transported and the hazards associated with each waste. It is the responsibility of the carrier to ensure that the person preparing the contingency plan has the ability and capability to do so. Those carriers who do not have a qualified professional in their employment should engage the services of a qualified consulting professional for preparing the contingency plan. A contingency plan is technical in nature, requiring the writer to be knowledgeable about the hazardous wastes, associated risks and options for management of the wastes in an emergency situation; a small portion of a contingency plan deals with communications. As noted in Section 9, the plan should include a certification statement within the document.

1. Policy Statement

A transportation company should have a policy statement reflecting its commitment to emergency prevention and preparedness. The statement should be simple and straightforward, and is usually signed by a senior official such as the Chief Executive Officer, the company president or the owner. A policy statement should include:

- management's commitment to safeguard the health and safety of the employees and the public, and to protect the environment
- a statement of the company's priorities in the event of a spill. In general, priority is in the order of the immediate safety of employees at the location of incident and the members of the surrounding impacted community, followed by protection of the environment
- a clear indication of the first-line supervisor's authority for emergency action and expenditure
- a statement regarding the company's approach to dealing with public and media inquiries
- a statement concerning the company's plan to monitor compliance with this policy
- the effective date of the plan

2. Purpose and Scope

The purpose of formulating a contingency plan is to develop a state of readiness which will allow for a prompt and orderly response to an emergency. This section of a contingency plan should state the intent and scope of the plan.



NOTE: Although many carriers transport hazardous waste across borders with other provinces and/or countries, it is necessary to recognize that the contingency plan must be written in such a way that the requirements of transporting hazardous waste in British Columbia are known and being complied with. Requirements from other jurisdictions may be included in the contingency plan. However, it is important to be aware that they are applicable and relevant only in those jurisdictions. The requirements under the applicable B.C. laws must be complied with while carrying out transportation activities in B.C.

3. Elements of Emergency Planning

3.1 Identification of the Hazardous Waste(s) and the Hazard(s)

The first step is to list the hazardous waste(s) to be transported and identify actual and potential hazards of each waste. It is important to list each waste type in the contingency plan. If generic names are given, include the contaminants in the wastes.

It is only after identifying the waste material that one can obtain the required information on physical, chemical, and toxicological properties of the material to be handled and transported. The contingency plan should identify all potential hazards and the types of damage that may result from an incident and a spill of each hazardous waste to be transported. The potential impact on downwind air quality or downstream water quality from the location of an accidental release to the environment and danger to human and animal health should be also clearly identified.



TIP: For easy of reading, tabulated information about the waste material and the associated hazards could be provided.

3.2 Risk Identification

The second step of the process is to determine the risk of an incident associated with each hazard. Risk identification is key to developing an effective emergency response plan inclusive of identifying options for proactive prevention and preparedness measures. The basic procedure in a risk identification or analysis is as follows:

- identify potential failures and incident events (including frequency).
- calculate the quantity of material that may be released in each event, estimate the probability of such occurrences, and
- evaluate the consequences of such occurrences based on scenarios such as most probable and worst-case events.

Look for answers to the following questions:

- What can go wrong and how often?
- What has gone wrong in the past?
- What would the effects/impacts be from something going wrong?
- What systems are in place to prevent an incident?

To reduce or eliminate identified risk(s), consideration should also be given to spill prevention and spill mitigation in conjunction with the preparation of a contingency plan. For this purpose, drivers and supervisors are encouraged to provide information concerning weaknesses in transport systems or operating procedures, "near misses," and potential problems they have observed, along with recommended measures for prevention/mitigation of such occurrences.

3.3 Legislation and Industry Standards

The contingency plan should identify federal, provincial and local regulations which apply to the transportation operations including requirements for pollution prevention planning, environmental emergency plans, and spill reporting. Examples of federal laws include [Transportation of Dangerous Goods Act](#) and [Regulations, Canadian Environmental Protection Act](#) and relevant regulations. Where it is appropriate, regulatory agencies should be contacted for identification of requirements for reporting and for protection of human safety and of the environment.

The principal provincial legislation and regulations to consider when preparing a contingency plan are:

- [Environmental Management Act](#)
- [Hazardous Waste Regulation](#)
- [Spill Reporting Regulation](#)
- [Spill Preparedness, Response and Recovery Regulation](#)
- [Contaminated Sites Regulation](#)

The *Environmental Management Act* requires that the responsible person must take all necessary actions to address the threat or hazard caused by the spill if a spill occurs or has a risk of imminently occurring. Responsible person is a person who has possession, charge or control of a substance or thing when a spill of the substance or thing occurs or is at imminent risk of occurring. In this case, the responsible person would be the carrier who is transporting the hazardous waste(s).

Spill Reporting Regulation was amended in 2017 and has specific requirements for reporting:

- All spills reportable under the Spill Reporting Regulation must be reported to the Provincial Emergency Program (PEP) by calling 1-800-663-3456.
- The person responsible for reporting the spill is the “responsible person” defined in the *Environmental Management Act*.
- List of information that must be provided by the caller when reporting a spill.
- Minimum reportable quantities of various substances (if the substance spilled meets or exceeds the specified amount, the spill must be reported).



TIP: For reportable amounts, it would be very helpful to provide a table as it makes it easier for a driver to visually find what the reporting quantity is. Consider providing a table with the following information:

Waste/Substance spilled (description and TDG class if applicable)	Spill Reporting Regulation Reportable Amount	Part 8 Transportation of Dangerous Goods Regulation Reportable Amount

In order to assist the driver and/or the person reporting a spill, specify when provincial reporting requirements apply and when federal reporting requirements, if any, apply.

Depending on the circumstances, other provincial legislation/regulations that may need to be considered are:

- B.C. Emergency Program Act
- Emergency Program Management Regulation
- B.C. Fire Services Act
- B.C. Land Act
- Wildlife Act
- Drinking Water Protection Act
- Health Act
- Animal Disease Control Act

The B.C. Trucking Association may be contacted for information about the National Safety Code and for the related training courses. The Association may also be contacted for information on other training opportunities for the safe operation of vehicles and for the safe transportation of hazardous substances.

3.4 Emergency Organization and Responsibilities

The contingency plan should identify the transition from normal operations to emergency response operations and the delegation of authority from operations personnel to emergency response personnel. For this purpose, the plan should identify an emergency response organization with appropriate lines of authority and how the response management will escalate. Responsibilities for decision-making should be clearly shown in an emergency organization chart. The plan should identify each responder's position or title in the company and person's duties and reporting relationship. Personnel with authority to invoke the contingency plan should be identified.

Sufficient details should be provided to ensure that all critical activities are covered.



TIP: organizational charts are excellent visual aids demonstrating emergency organization; flow charts with action items easily shows responsibilities



NOTE: The B.C. Provincial Government recognizes and uses the [Incident Command System \(ICS\) organizational system](#). This should be noted if assistance from the Province is deemed necessary.

3.5 Resources

Resources that should be considered to assist in the incident include:

- company equipment and material (provide a list of these items and location where they are stored)
- company personnel availability (provide a list of these with contact information and titles)
- transport services (provide a list of these)

- safety and monitoring equipment suppliers (provide a list of supplier, contact information and items each supplier has)
- external spill response and/or cleanup services (provide a list of the service provides, contact information and specify type of service being provided)
- external resources/personnel availability (provide a list of resources, contact information and specify type of service being provided)
- NOTE: lists can be either included in the body of the plan or in appendices

Carriers should also determine what resources (regulatory and technical information) can be provided by the federal and provincial governments. CANUTEC is an example of a federal technical information source and can be accessed at: <http://www.tc.gc.ca/eng/canutec/menu.htm>. NOTE: The use of CANUTEC phone number and CANUTEC services are provided only to Canadian companies who have registered with CANUTEC and received a written agreement.

Identification and maintenance of the physical/material resources, regular testing of equipment and periodic training of personnel should also be part of the contingency plan.

The plan should recognize the need for and availability of resources available close to the locality where the incident takes place, such as:

- fire departments
- police departments
- municipal and provincial agencies
- hospitals
- doctors
- any industry supported co-operative(s) and contractors that operate in the area of spill cleanup and environmental remediation.

3.6 Internal Notification

In an emergency situation, information should be communicated quickly and accurately throughout the affected organization. The purpose of this portion of a plan is to establish an effective emergency communication network and a procedure for the prompt notification of individuals and groups in the company who are trained for response to an accidental spill.

The section must identify the means for 24-hour a day notification of first responders and officials who can provide direction to and control of the response effort. A notification guide should also include a list of backup personnel for emergency response and their telephone numbers (cellular, pager, and home numbers). To prevent system breakdown, an "alternate" person should be designated for each key position of designated responsibility.

The notification procedure may include flow charts and checklists indicating who should be involved, who has the responsibility to notify these individuals, how the notification is accomplished (e.g., paging systems, cellular or mobile phones) and the use of "fan out" (a call to one person/agency who in turn

calls one or more key individuals) during major spills. These numbers and checklists may be posted in vehicles for ready use or distributed as pocket cards.



TIP: flow charts are useful means of describing internal alerting.



NOTE: A list of all company contact information should be provided in the contingency plan (or in the appendices portion), including home, page and cell numbers where applicable.

3.7 External Notification

The plan should describe how and when the fire and police departments, federal departments of Transport Canada (in the case of a spill into marine waters, Canadian Coast Guard) and Environment Canada, and the Provincial Emergency Program (PEP), news media, and volunteer or contractual workers should be contacted during working and non-working hours. Contacts for reporting purposes should also be included in the contact telephone listing. Roles and responsibilities of those outside the transport company should be clearly defined. Duplication can be eliminated by ensuring coordination among the various participants that provide similar services.



NOTE: Division 2.1 of the *Environmental Management Act* and the Spill Reporting Regulation require that the person who has possession, charge or control of a substance when the spill occurs or is at imminent risk of occurring to immediately report the spill to the Provincial Emergency Program (PEP). In the case of an emergency on a road in B.C., the driver is the person that should make the initial report of the spill to PEP; it is not his/her supervisor, the dispatch, the emergency co-ordinator or the president of the transporting company. However, if the driver is not able to report the spill, then another employee of the company must make the notification. Subsequent reporting requirements under the Spill Reporting Regulation such as updates and end-of-spill report may be made by the carrier or other representative/agent of the carrier.



TIP: flow charts are useful means of describing external notifications required.



NOTE: A list of contact information for all external agencies should be provided in the contingency plan (or in the appendices portion), such as local police and fire, federal agencies and provincial agencies. A list of contact information for external resources should also be provided in the contingency plan; these could include contractors for spill clean-up on land, clean up on water bodies, consultants, disposal facilities, etc.

3.8 Electronic Communications

During an emergency, effective and reliable electronic communications equipment and procedures are vital. This section of the plan should detail the types of communication equipment to be used by personnel during a spill response. For instance, if a land line is unavailable or out of commission, then back up is required. Since normal means of communication can break down in an emergency, alternative

means should be considered. Cellular telephones, megaphones, two-way radios and messengers can be used.

3.9 Public Affairs

Public relations are extremely important in an emergency situation. Inquiries will normally be received from the media, government agencies, local organizations and the general public. This section of the Contingency Plan should include a public relations or media plan. It should identify a media spokes person. In large companies, there could be an Information Officer, etc. In small companies, it may be the owner or a senior manager.

Initial information provided should be restricted to statements of facts such as the name of the Carrier involved, type and amount of spill, time of spill, and countermeasure actions being taken. For major incidents, to avoid mixed-messages, the Ministry prefers issuing media releases jointly by the Ministry and the transport company.

Plans may also be developed to utilize local media for periodic announcements during a major spill.

4. Emergency Response to Spills

4.1 Response Action Decision

A Contingency Plan should have emergency coding that defines the severity and potential impact of an accidental spill. The three levels of emergencies may be identified as follows:

1. **LEVEL I:** minor spills requiring only the driver to respond and take necessary actions.
2. **LEVEL II:** intermediate level spills requiring response by a driver or off-site trained staff but posing no immediate danger to the public or harm to the environment. Media may be present.
3. **LEVEL III:** a major incident beyond the resources of the Carrier, where there are subsidiary problems to complicate the situation such as fire, explosion, release of toxic compounds that threaten safety of life and community water supplies, property and the environment. Assistance will be required from local, regional, and/or provincial organizations. The media will likely be present.



NOTE: the contingency plan should outline procedures for responding to the different levels of spills. If the levels of emergency are connected to the amount spilled, reporting requirements should be consistent with the Spill Reporting Regulation's requirements and if applicable, the federal reporting requirements as well.

After discovery of the incident, information gathering and action decisions are the first steps in responding to an accidental spill incident. All these steps may occur over a short or protracted time period depending on the circumstances and magnitude of the incident. The plan should identify the responsibility of the personnel having on-scene authority to evaluate the situation, assess the magnitude

of the problem and activate the contingency plan; personnel carrying out these activities should be qualified and have the knowledge to perform the necessary tasks.



Federal reporting requirements under the [Transportation of Dangerous Goods Reg \(Part 8\)](#) may be the same or different from the reporting requirements under the provincial reporting requirements ([Spill Reporting Regulation](#)). When actions are different for these regulations, it is appropriate that they are noted in this part of the plan so that all parties are cognizant of the different requirements.

When there are releases to the environment in an amount equal to or greater than the amount listed in the [Schedule in the Spill Reporting Regulation](#), the requirements of that regulation must be followed and be included in the contingency plan (e.g., reporting amounts, reporting person, information to be reported), including immediate notification to the Provincial Emergency Program (PEP). The information to be reported to PEP could be described either in this part of the plan or in an appendix; the Ministry's hazardous waste website provides a template for companies to create their own [Spill Reporting Information form](#).



NOTE: All spills require response and remediation even if the volume spilled is below that requiring reporting.

4.2 Plan Activation and Response Mobilization

Normally, upon receiving initial notification of an incident involving release of hazardous waste into the environment, the individual having on-scene authority will assess the magnitude of the problem and potential threat to personnel, equipment, public safety and the environment. If the situation warrants, the person having authority to invoke the contingency plan will activate the plan. Situations should be assessed on their own merit to develop an appropriate response strategy.



As indicated above, the person who was in control of a substance just before it was spilled must immediately report the spill to the PEP when the amount of spilled substance is equal to or greater than the amount specified in the Spill Reporting Regulation for that substance. Where it appears to a person observing the spill that the report to PEP has not been made, that person must report the spill. Since this is a legal requirement, it should be incorporated into the contingency plan and complied with.

This requirement should not be changed in order to suit a carrier's umbrella emergency plan and/or to satisfy a requirement of another jurisdiction. However, where that person who had control of the substance last is not able to report the spill, another employee of the transportation company may do the reporting.

For each type of incident/spill, the plan should include a specific Action Checklist. The action items may include the following:

- identify the nature of the incident and ascertain if there are casualties.

- Identify the location of incident and the area of immediate risk and the potential for escalation.
- raise the alarm, alert the local, provincial and federal emergency services and activate the appropriate warning system.
- mobilize the appropriate resources to isolate the hazard as much as possible and to implement "first aid" remedial actions.
- initiate procedures for the protection of personnel, property, the public and the environment. A detailed procedure for each foreseeable emergency should be included in the plan.
- implement procedures for the protection of vital resources, continuity of traffic and security of the property and records.
- activate emergency communications links. Notify senior personnel of the company, the appropriate agencies and potentially affected parties in the area as appropriate.
- liaise with officers of the emergency services and with other senior personnel as they arrive at the location of incident and cooperate as required.
- call for further assistance as may be necessary.
- keep abreast of developments and ensure that the means of giving and receiving information, advice and assistance are functioning effectively, including those related to public relations.
- as appropriate, implement approved procedures for rehabilitation of the location of incident and the local impacted environmental components (land and water).

4.3 Response Action/Containment/Cleanup

This section should identify the operational methods to manage an accidental spill or emission, as well as the location, capability, and limitations of equipment to be used. The plan should list available equipment, including in-vehicle, how it is to be accessed and who has the responsibility for accessing the equipment. The plan should also describe how people and equipment will get to the location of incident, how they will be supported during the crisis and how crews will be supplied for the duration of the incident.

It is recognized that most details will likely be general as the response capability and approach would be dictated by the incident severity, location, etc.



Since other legislation and regulations, such as the [Spill Reporting Regulation](#), the [Spill Preparedness, Response and Recovery Regulation](#), and/or the [Contaminated Sites Regulation](#) may be involved in these operations, they should be noted here.



NOTE: in addition to the initial spill reporting to the Provincial Emergency Program (PEP), the Spill Reporting Regulation requires regular reports, updating the minister of the status of the spills until the completion of the emergency response activities.

4.4 Evacuation

The purpose of this section is to include procedures for notification and orderly emergency evacuation of the population in the immediate area and any surrounding community that may be impacted. B.C. communities are expected to have their own emergency plans, and carriers are not likely to be involved in organizing an evacuation. Any necessary evacuation would be carried out by local government.

Nevertheless, if the carrier has information regarding the minimum evacuation distances for the type of hazardous wastes they are transporting, they should provide such information to local authorities and first responders to assist them in the evacuation process.

4.5 Disposal of Spilled Contaminants and Debris

This section should contain procedures for the removal of recovered spilled material and contaminated soil or absorbents and location of temporary and/or permanent storage facilities for contaminated materials. The various possible treatment and disposal options such as incineration, reprocessing, burying, etc. should be covered in the plan along with procedures for obtaining any required approvals or permits from government agencies. Requirements for transportation of waste materials would be applicable as well.



Legislation and regulations, such as the B.C. Environmental Management Act, the Hazardous Waste Regulation and the Contaminated Sites Regulation will likely be involved in determining and implementing appropriate waste disposal, and therefore these should be noted here.



NOTE: Provide names and contact information of the possible external resources to be used for managing, transporting and disposing the spilled contaminants and debris.

4.6 Site Restoration/Remediation

This is the action taken to restore the affected environment to the pre-spill conditions. The required degree of restoration will usually be determined through consultation between the party responsible for the spill and the government regulatory agency with primary responsibility for that activity. The owner of the affected site will also be involved in the consultation process.

Restoration can include physical removal of contaminated surface materials, high-pressure washing, chemical cleaning, replacing of contaminated soil materials, restocking of lakes, and bioremediation. Only personnel who have the appropriate qualifications should be allowed to perform site evaluation and site restoration.



The application of other legislation and regulations, such as the [Contaminated Sites Regulation](#), to the site restoration/remediation, should be noted here.



NOTE: The plan could indicate the name(s) of qualified professionals or companies who will ensure that the spill location is brought back to pre-spill conditions. Identifying site restoration/remediation resources is part of the proactive planning phase of contingency plan development.

4.7 Post-Incident Evaluation

The plan should specify that a post-incident evaluation be completed on both mock exercises and actual emergency incidents and describe the manner in which the evaluation is to be carried out. The primary purpose of the post-incident evaluation is to identify from the spill response operation the weaknesses or strengths of the Contingency Plan and to make appropriate corrections to the plan. Other uses for post-incident evaluation include accounting, legal, and public relations matters.

The post-incident evaluation should include the following:

- suitability of the organization structure, equipment, communication system, etc.
- adequacy of training, alarm systems, contingency plan manual, control centre, communication plans, security, spill containment and recovery procedures, monitoring, etc.
- appropriateness of the spill response action plan, media communications plan, etc.

A contingency plan should provide for a written report on each incident. The report should include:

- a general description of the incident
- source and cause of the incident
- description of the response effort
- amount spilled and percent recovered
- itemized cleanup costs
- recommendations for preventative and mitigative measures
- plans for upgrading response preparedness and contingency plans



When other legislation and regulations and authorities are involved or required in this phase, they should be noted here.



NOTE: The Spill Reporting Regulation requires an end-of-spill report to be submitted. In addition, this regulation allows the director to order the carrier to submit a “lessons-learned” report.

5. Training and Practice Drills

5.1 Training

Competency in responding to spills requires a complete understanding of the roles and duties of each responsible person on the team. Comprehensive training in the use of emergency response equipment and personal protection devices and tactics is necessary to ensure the best response capability. Provision for training is an integral part of a complete response planning and implementation program. Initial training should be followed by periodic updates to maintain familiarity with all aspects of the plan.

This section of the plan should provide details of training programs for the company personnel and any associated personnel, if any, involved in responding to a spill. The amount, type and frequency of training for each member of the team should be clearly spelled out.

Training should be provided at least annually and in the following situations:

- for new employees during their orientation period
- for existing employees when there is a change in their duties
- when new equipment or materials are introduced
- when emergency procedures are revised
- when a drill indicates the need for improvement
- when changes to legislation and regulations occur

5.2 Practice Drills

This section should provide for periodic simulation exercises or practice drills. It is important to develop employee skills and evaluate the adequacy of the contingency plan through the use of mock exercises or drills. Practice drills are usually given to an internal response team, if there is one, or to key employees that would respond to emergencies in one way or another. The objectives of a drill include evaluation of the following:

- practicality of the plan (structure and organization)
- adequacy of communications and interactions among parties
- emergency equipment effectiveness
- adequacy of first aid and rescue procedures
- adequacy of emergency personnel response and training
- public relations skills
- evacuation and personnel count procedures

Drills may be conducted in various forms such as desktop, on the road or computer-synthesized. The complexity of the drill may be increased as the response team gains proficiency. Drills should be frequent enough to ensure that the response team maintains proficiency in all aspects of the contingency plan. Drills should be conducted in a variety of situations. It is also desirable to include public emergency response organizations, such as the local first responders and Ministry personnel where appropriate, in these drills.

6. Plan Evaluation

This section of the plan should describe step-by-step procedures by which the plan may be evaluated internally. The purpose of evaluation of a spill response plan is to determine the adequacy and thoroughness of the plan. The ease of understanding and using the plan will also be important considerations.

7. Plan Updates

A procedure should be in place to update the contingency plan on a regular basis so that its call-out numbers and procedures are current. When amendments are made to a plan, one possible approach to updating would be to note the date of the amendment on the updated page of the plan. A senior

employee of the company could be designated to ensure that all plan-holders are notified of changes as soon as possible. Plan-holders could then be requested to verify that they have received the changes.

The most common amendments include updating lists of telephone numbers of response personnel, equipment, chemicals handled, emergency services available and other relevant resources.

Plan holders should be notified immediately of any key changes regardless of review period.

Record of updates and revisions, including version numbers, dates, revising personnel, approving management personnel and authorities, if applicable, should be included in this section.

8. Record Keeping

Records of the following documents and information should be kept on file for inspection by ministry staff and other authorities who may participate in emergency response activities, and for the carrier's reference:

- Record of the plan updates and revisions, including revision numbers, dates, revising personnel, approving management personnel and authorities, if applicable, should be included in this section
- Record of staff training, including names of staff, dates of training, content of training, training provider
- Record of drill and practice exercises, including dates, staff involved, equipment used, extent of exercises
- Record of plan evaluation including dates, staff involved in evaluation, documentation
- Record of incidents and near misses, including staff names, dates, details of occurrence, agencies involved, reports prepared, etc.

9. Certification of the Contingency Plan



All contingency plans must be certified as accurate, appropriate and complete by the person or persons who prepare them. Accordingly, the person(s) who prepared the plan should provide a statement certifying its accuracy, appropriateness and completeness, signature, date, and provide his/her name, title, and credentials on the certification. In addition, confirm the carrier's commitment by stating that the contingency plan will be tested periodically and used in the event of an emergency or spill and pertinent employees, including drivers, have been trained in the contingency plan.

Example of certification wording:

I, (signing authority's name), certify that this contingency plan is accurate, complete and appropriate for the transport operations and the types of hazardous wastes that are described in this plan and that (carrier's name) is licensed to transport. I also certify that this contingency plan was

prepared in accordance with the “Guidelines for Preparing Contingency Plans for Carriers of Hazardous Waste”.

10. Appendices and Operational Guidelines

In an emergency situation it is extremely important that response personnel have immediate access to vital information. For this purpose, some of the information may be organized in easy-to-follow tables in the appendices.

Types of information that may be included in the appendices include:

- response team and key company personnel call out list
- provincial, federal and local government agencies, news media and medical services telephone list
- organization, roles and responsibilities
- incident/spill report forms
- on-vehicle spill response equipment list
- mobile and response equipment list by location
- equipment inspection and maintenance schedules
- air, and water-quality monitoring procedures
- weather information contacts
- statutes/laws/regulations (e.g., Spill Reporting Regulation)
- emergency evacuation plan
- cleanup contractors list
- decontamination procedures for cleaning response equipment, and clothing and footwear of response personnel
- material safety data sheets for materials to be transported, if applicable
- contingency plan distribution list

III. Resources

The following is a list of resources that can be used to assist a carrier in preparing the contingency plan:

1. [B.C. Guidelines for Industry Emergency Response Plans](#), as updated from time to time
2. Canadian Chemical Producers Association, TEAP, TRANSCAER
3. [Canadian Standards Association](#), CSA Z731-03 Emergency Preparedness and Response Standard and CSA Z1600 Emergency Management & Business Continuity Programs, as updated from time to time.
4. Commission of the European Communities, Emergency Planning for Industrial Hazards, edited by edited by H.B.F. Gow and R.W. Kay, 1988
5. Hazardous Materials, Managing the Incident, by Gregory G. Noll, Michael S. Hildebrand, and James Yvorra, 2005
6. [United States National Response Team](#)
7. Publications from the Fire Protection Publications of the Oklahoma State University and the [International Fire Service Training Association](#) (IFSTA)
8. Transport Canada, [Emergency Response Guidebook](#) as updated from time to time, Dangerous Goods Directorate.
9. [US Department of Transport](#), [Emergency Response Guidebook](#) as updated from time to time.
10. Environment Canada, [National Environmental Emergencies Contingency Plan](#)
11. CANUTEC services: <http://www.tc.gc.ca/eng/canutec/services-249.htm>
12. The British Columbia Trucking Association: <http://www.bctrucking.com/>
13. Laws of British Columbia: <http://www.bclaws.ca/>
14. B.C. [Environmental Emergency Response Officers](#)
15. B.C. ENV, [Hazardous Waste website](#)