



Communications

This is the key to appropriate control and management of an incident. The plan will identify how various personnel will communicate en route and at the scene, by cellular phones, radios, fax machines, etc. There should be clear operational procedures for using them and the radio frequencies used by various organizations should be clearly indicated. Consideration should be given to the need for spark or explosion proof equipment and the need for extended periods of use under adverse conditions. The plan should also specify who is to be in communication with the various parties.

Logistics

Supplies that would normally be relied upon may be unavailable as a result of the incident. Plans for procurement of materials from other sources should be considered. The plan will describe how people and equipment will be sent to the site and how they will be supported for the duration of the incident. The plan should assume that roads might be impassable, requiring alternate routing. There should be a discussion on the implementation of an Emergency Operations Centre and an Incident Command Center, depending on the terminology used. Occupational Health and Safety Procedures to be implemented at the accident site should be included in the ERAP. Site Security and Safety includes controlling and recording who enters the site, verifying proper identification, attending to injured persons, establishing evacuation procedures, decontaminating the injured, personnel, equipment, materials and the dangerous goods involved in the incident. It is likely that a local authority will establish Site Security and will record who is granted access, their purpose for being there and verify proper identification on arrival and departure. Provisions should be made for decontamination sites that may not necessarily be in close proximity to the incident. For long-term responses, logistical planning includes shift changes, rest periods and nutrition.

Equipment and Materials

The plan will state a policy on wearing Personal Protective Equipment (PPE), give consideration to the difficulties encountered with heavy clothing in winter, the level to be worn (A to D) and list the specialized equipment to be used. Specific instruments may be required and the designated responders will need to know calibration procedures and proper use of instruments including their limitations under severe environmental conditions. A list of all relevant equipment will be in the plan. The plan holder needs a list of alternate containers, repair materials, neutralizers, decontamination and transfer equipment. When outside resources are identified in the plan, the applicant should evaluate them in advance. Any sharing of responsibilities during a response must be understood and agreed to amongst the parties. Letters of agreement for sharing services and contracts with emergency responders should be included in the plan.

Personnel

The plan will describe the response organization, roles of key personnel including team members and their qualifications. Each person involved must be aware of his/her role and duties. There is a need for responders to have a recognized level of competency. The levels usually discussed are: an awareness of dangerous goods in general, the classes involved and their basic properties, an operational level in which the person can respond in a limited capacity, a technical level for those who have greater training and experience in response, a specialist level and an incident command level.

Mutual Aid

Any formal written agreements are to be submitted with the application and verbal agreements should be listed for future verification. They should clearly indicate the sharing of responsibilities and specific on-site response tasks to be done by the parties to each agreement.

Media Considerations

A media relations officer should be available to provide factual information on the incident to those concerned and provide updates as agreed to. Good media rapport from the onset will assist authorities in making decisions related to safety, including possible evacuation.

Preparedness

Training

Because emergencies can be dramatic and emotional, untrained and inexperienced staff will have difficulty dealing effectively with the incident, especially if it occurs in an unfamiliar setting. The plan should outline a comprehensive training policy aimed at providing a thorough emergency response. Practice in the use of response materials including personal protection, machinery, instrumentation and specialized equipment is a major component of training. Knowledge of the construction of containers, packaging and means of transport also contributes to an effective response. The response team leaders should have demonstrated managerial skills along with the ability to communicate clearly and to work under pressure. They should be familiar with specified technical procedures to be able to function effectively at an accident site. The plan will include records and training certificates for the response team members relevant to the dangerous goods for which the plan is approved.

Exercises, Incidents and Investigative Follow-ups

A plan should be tested at least annually under conditions similar to an actual event. This can be done in stages, from telephone activation testing, to tabletop exercises and a full-scale exercise. Tabletop exercises help discover plan deficiencies without the time and expense of simulations. Field exercises, using realistic and probable worst case scenarios, should be arranged so that the plan is effectively tested. It is expected that the plan holder will be able to work with first responders, other emergency responders and emergency managers at the time of the incident. Participation from local authorities and responders in the exercises would therefore be invaluable. Depending on the situation, it may be desirable to include federal, provincial and municipal participation in the exercise to help clarify the roles by all concerned.

Equipment and Maintenance

Preventive maintenance of response equipment, including regularly scheduled sessions for operational testing and inventory control is critical to a plan. Log books or maintenance records verify who is responsible and when the equipment was last tested.

ERAP Revisions

A formal process for updating the plan and informing all plan holders of these changes should be implemented. Pages should be numbered and dated and those left intentionally blank should also be marked. Information that commonly requires changes includes names and telephone numbers of personnel and services. Amended pages and return verification from those to whom revisions are sent should be included. After each incident or exercise, the plan should be updated according to changes made to the plan as a result. A new application is required if there are additional dangerous goods to be included in the plan. Any significant change, such as activation telephone numbers or geographical area of coverage of the plan must be communicated to Transport Canada.

Distribution Listing

The plan should include a list of the names, addresses and affiliations of those who need to be aware of the plan and to whom the plan should be given to.



Introduction

Emergency Response Assistance Plans (ERAPs) are required by the Transportation of Dangerous Goods Regulations (TDGR) for certain very harmful Dangerous Goods that necessitate special expertise and response equipment. The plans are intended to assist local emergency responders by providing them with technical experts and specialized equipment at an accident site.

The plan will explain how specialists and other personnel with knowledge, equipment and skills will be available at accident sites for the more hazardous dangerous goods. These plans supplement those of the carrier and of the local and provincial authorities, and must be integrated with other organizations to help mitigate the consequences of an accident.

In order to comply with the TDGR, an approved plan is required prior to certain dangerous goods entering the transportation system. Part 7 indicates the need for and the process to follow in order to obtain the approval of an ERAP. The reference number will be issued in writing by Transport Canada upon the approval of the ERAP. The reference number and activation telephone number must be displayed on the shipping document accompanying the consignment for which the plan is applicable. The Transport Dangerous Goods Web site at <http://www.tc.gc.ca/tdg/menu.htm> has a sample plan to assist in preparing a plan.

If the quantity requirements outlined in column 7 of Schedule 1 of the TDGR are met, a person who offers for transport or imports one or more consignments of dangerous goods must have an approved ERAP, unless that person is acting on behalf of another person for whom an approved ERAP has been assigned for the dangerous goods.

An ERAP application is submitted in writing to the Minister or a designated person. In practice, the designated person is the Chief Response Operations. The application may be sent to: Chief Response Operations (ASDB), 330 Sparks Street, Place de Ville, Tower C, 9th floor, Ottawa, Ontario, Canada, K1A 0N5. An ERAP application is submitted by way of a letter, or electronic-mail (TDG@tc.gc.ca) and must provide sufficient information that a fire department responding to an incident would have an appropriate understanding of how a dangerous goods release could occur, how these materials could react under the circumstances and what actions can be undertaken to remedy to the situation.

The application must contain specific information including a telephone number which will cause immediate activation of the ERAP, a description of the emergency response capabilities including the number of qualified persons available to give technical advice over the telephone, the number of persons available to advise and assist at the scene, a list of specialized equipment that is available for use at the emergency site, the response actions capable of being taken, a description of the transportation arrangements to bring the equipment and personnel to the accident site, and what communication systems are expected to be used there.

Copies of any formal agreements with a third party for assistance to the plan registrant are to be included in the application.

Remedial Measures Specialists with Transport Canada are responsible for evaluating the ERAP. They will conduct a comprehensive audit based on a review of the written plan, interviews with key personnel, visit(s) to inspect response equipment, records of training, discussions on previous accident attendance and full scale exercises, and tests of various aspects of the plan, including the emergency telephone number to activate the plan.

A plan will be approved when Transport Canada is satisfied that there is a capability to suitably respond to emergency situations for those dangerous goods listed in the plan. Approval may be given on an interim basis if the application contains all the required information and there is no reason to suspect that the plan is incapable of being implemented (TDGR Subsection 7.2(2)).

Format

Every plan should state the structure of the organization, the response policy and the purpose of the plan, the geographical scope, and a list of those dangerous goods covered by the plan.

There will be a discussion of incidents that may be encountered in the transportation cycle, preventive measures, and a determination of the resources needed to mitigate an incident. The plan will also indicate detrimental effects with respect to health, safety, property, infrastructure and the environment.

Consideration of the type and size of proper means of containment, destinations and modes of transport will dictate the level of detail required in the plan.

It is expected that Standard Operating Procedures (SOP) are in place for notification, alerting, mobilizing,

including specific procedures expected to be followed such as transfer of dangerous goods in direct contact with the large means of containment, decontamination and recovery or neutralization of spilled materials.

The plan should be a controlled document requiring periodic review and revision as personnel, equipment and training are being updated, and as training exercises or incident attendance identifies changes to be made to the response system. Exercises and incidents may identify ways to avoid potential hazards in recognizing methods to improve containerization, retrofitting, removing hazards to the containment, installing chemical protection systems or hazard warnings.

ERAP Verification

The Remedial Measures Specialists will assess the ERAP from the standpoint of:

- Potential Accident Assessment
- Activation
- Response
- Resources
- Preparedness

Potential Accident Assessment

A Potential Accident Assessment (PAA) is the most important function and is the starting point to developing the ERAP. It will help identify potential problems that could be encountered in the transportation cycle and determine which resources will be needed to mitigate an incident.

As stated in the TDG Regulations, this assessment must include a general analysis of how an accidental release of dangerous goods could occur; the physical and chemical properties and the characteristics of the chemicals involved; a general description of the potential consequences of an accidental release; what actions the plan holder is expected to take in case of an accident, including description of any agreements entered into to assist in the remediation.

Afterwards, one can create a selection of representative scenarios including a reasonable "worst case" event to be included in the plan. One goal for this would be to identify steps that can be taken to reduce the probability of the occurrence. This may include changing the means of containment, mode of transport, determining which dangerous goods can be

safely transported in proximity with others, protective retrofitting, fire and chemical protection and warning systems.

The scenarios will include consideration of the factors related to topography, routing through major populated areas, weather and should consider incidents related to theft, sabotage and breaches in security.

ERAP Activation

Internal Alerting

Calling the activation telephone number indicated in the registration application will normally activate the plan. This number is registered with Transport Canada and may not be changed without first informing Transport Canada. The first call to this registered telephone number should reach a person who is trained for and capable of activating the plan. If there is a receptionist, guard or control room operator, or an answering service responding to the first call, that person must be able to contact an on-call person immediately.

These emergency numbers will be printed prominently in the text of the plan and the use of a flowchart will promote a better understanding of the steps to be followed.

Situation Appraisal

An Emergency Response data form should be used to obtain relevant information from the initial caller requesting help. This includes basic points such as date, time, location, injuries, dangerous goods involved, means of containment, placard or label identification, shipping document details, weather conditions, and other circumstances.

The information gathered would include who is at the accident site, who has been notified, what steps are being done to mitigate the situation and type of help requested. The person who is obtaining this information may be the person identified to give technical advice over the telephone, or will pass it to the person designated to receive such calls so that he can give the appropriate advice. This information is used to conduct an initial assessment of the incident and to determine what actions and what assistance are required.

Priorities for preventive and corrective measures to protect lives, property and the environment at the accident site are to be determined by the technical advisor.

Authority and Mobilization of Resources

The plan should identify who has the authority to order personnel and equipment to the scene; who will be in charge at the scene and the chain of command for the organization.

Usually there are various listings identifying personnel, team leaders and members, technical and environmental advisors, medical advisors and designated spokespersons.

Flow charts and checklists are valuable decision-making tools for condensing information. There should be sufficient detail to ensure that all critical activities are considered.

Response Tasks

Technical Advisor

The plan holder is required to designate one or more technical advisors available to provide immediate assistance by telephone and, if required, to attend the scene within 6 hours. These advisors will have an in-depth knowledge of the dangerous goods involved, compatibility with the containers used and other chemicals involved, response equipment to be used, an ability to interpret technical bulletins, understand the proper selection, calibration and use of detection and air monitoring instrumentation; plume dispersion modeling and techniques, neutralization and disposal, recovery and transfer operations, effective communications, Incident Command and similar systems of response. Many of these qualifications will be supported by appropriate certification.

The advisor may be requested to give opinions on evacuating people and animals and provide advice to emergency medical services.

External Alerting

Part 8 of the TDGR entitled: "Accidental Release and Imminent Accidental Release – Report Requirements" states that certain authorities are to be contacted when a shipment is interrupted.

The carrier, as the person who has charge, management, or control of the dangerous goods, is obligated to take a number of actions upon the discovery of an incident. In addition, there may be other organizations that will be on the scene. There may be a duplication of activity and responsibility by authorities and other organizations depending where

the incident occurs. This may be resolved by the fact that the plan holder has specified in the plan the lead agency he will be relying on in case of an accident.

The ERAP will describe how various authorities will be notified and who is tasked to do so. This will include police, fire, ambulance, spill control centers, response personnel outside of the worksite, environmental officials and other provincial and federal authorities. It will also include manufacturers and suppliers, medical facilities, transportation resources and others listed under External Resources in the plan.

Emergency Action / Containment / Cleanup

For every dangerous good listed in the plan, methods for minimizing potential danger and handling the dangerous goods should be provided along with the type, location, capability and limitations of the equipment to be used.

Information required includes whether the material should be extinguished or allowed to burn; whether water used for fire fighting can be contained to eliminate pollution by contaminated runoff and whether materials can be neutralized effectively. Consideration should be given to water reactive substances and comments should be provided on which materials may pose a greater danger if treatment options are attempted.

The plan should describe how to assess damaged containers, the methods of detecting and monitoring leaks, the initial response procedures taken including container stabilization to reduce or stop releases, diking, storing, transferring, flaring and disposal of dangerous goods and consideration toward restoration and reclamation. The response tasks which are specific to the dangerous goods should be indicated in the plan so it is clear what the anticipated actions of the plan holder are to be at an accident site.

Resources

Contact List

The plan should include accurate up-to-date telephone lists including personnel within the organization, regulatory contacts, CANUTEC, contractors, technical specialists, relevant government contacts, vehicle and air charter companies capable of transporting the equipment identified as being required at the site. It may be necessary to note which of these telephone numbers can only be accessed during specific hours.