ROAD TRANSPORT/PRODUCT DELIVERY EMERGENCY PREPAREDNESS

AIGA 039/16

(Revision of AIGA 039/06)

Asia Industrial Gases Association

3 Harbour Front Place, #09-04 Harbour Front Tower 2, Singapore 099254
Tel : +65 62760160 Fax : +65 62749379
Internet : http://www.asiaiga.org

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Acknowledgement

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Amendments to 039/06

Section	Change
	Extensive rewrite to improve clarity and addition of new clauses.

Note: Technical changes from the previous edition are underlined

1 Introduction

An effective response to a road transport / product delivery emergency is essential to eliminate the hazards and lessen their impact if an incident occurs. A Road Transport / Product Delivery Emergency Preparedness Plan takes this one step further by looking at the actions and initiatives that need to be developed prior to any such incident. This process would usually entail the following activities: response planning, training and practice, and at the time of an incident, doing a risk assessment.

2 Scope and purpose

This document is intended for all persons within and outside the gases industry who may become involved in a gases industry transport / product delivery emergency or recovery operation. This may include company emergency response team (ERT), transport contractors, emergency service personnel, vehicle recovery operators, and members of the environmental agency.

The purpose is to provide a framework for the actions and initiatives required of all personnel involved in handling road transport / product delivery emergencies. This document does not provide guidance on the specific remedial actions required for the recovery of the vehicle and/or product. Those aspects of the emergency response are well covered in EIGA 81/06 'Road vehicle emergency and recovery'.

An emergency situation is defined as an event where there is either a major transport / product delivery operational problem (for example, a fire, major spill or serious traffic incident), or where there is a loss of life or considerable environmental damage and there is a possibility of media coverage.

Road transport equipment included are road tankers (insulated and vacuum insulated), tank containers, tube trailers, and cylinder vehicles.

3 Definitions & Terminology

Terminology:

- *Shall* indicates that the procedure is mandatory. It is used wherever criterion for conformance to specific recommendation allows no deviation.
- *Should* indicates that a procedure is recommended.
- *May* and *Need not* indicate that the procedure is optional.
- *Will* is used only to indicate the future, not a degree of requirement.
- *Can* indicates a possibility or ability.

4 Road transport / Product delivery emergency preparedness priorities

Preservation of "life and limb":

This includes the safety of the emergency team members, the general public and all other personnel involved in emergency handling.

Preventing escalation of the incident:

This includes reducing the disruption caused by the incident.

Minimizing environmental damage:

Most industrial gases products do not create any serious environmental damage, unless as specified in Material Safety data Sheet of the individual gas.

Minimizing cost:

Minimize costs during emergency handling and the recovery phase,

Media relations:

Although lowest on the priority list, it is important that any media attention is correctly handled and that the correct internal reporting procedure is followed.

With this in mind, the organisation needs to develop in-house road transport / product delivery emergency procedures as part of an emergency preparedness, and train and equip an emergency team to safely and professionally cope with all possible offsite transport / product delivery emergencies.

Industrial gas products can be hazardous and a major road incident could lead to a catastrophe which could considerably affect the business and ruin its public image, if the incident is not handled promptly and professionally.

Examples of such incidents are:

- Tanker rollover with major liquid oxygen spill.
- Hydrogen tube trailer on fire.
- Cylinder truck incident with major toxic gas leakage.
- Truck incident with flammable cylinder gas explosion.

5 Emergency organisation structure and responsibility

Transport emergencies can occur anywhere and at any time. Therefore, it is critical to the success of any transport / product delivery emergency response that an appropriate emergency organisation structure is set up. All personnel who are members of the emergency response team must be well trained and competent to handle the situation in as professional a manner as possible.

The areas to be covered include:

- Planning and understanding the lines of communication, both internally and externally.
- Equipment preparedness.
- Stabilization of the emergency at the scene.
- Recovery of the vehicle and equipment.
- Dealing with the media.
- How to quickly return to normal operation.

It is very important that all members clearly understand their duties, responsibilities, and chain of command. A typical team's structure is shown in the simplified emergency team organisation chart in Figure 1. The responsibilities for the various team members are briefly described below.

Emergency controller

The emergency controller is the sole area person in charge of an emergency situation, to whom all other emergency team members report. The controller's main duties are:

- On receiving a serious incident report, assesses whether the situation calls for deployment of the emergency team to the scene of incident.
- Informs key management personnel and company spokesperson of current situation and reports periodically if the situation escalates.
- Decides whether the situation calls for involvement from public emergency services such as the fire brigade, highway police, ambulance and transport safety centre. If it does, gives the order to the emergency co-ordinator to make contact.
- Goes to the scene of the incident, identifies himself/herself as the emergency controller, and sets up an "Emergency Control Centre" (at a safe distance and up wind from the incident scene).
- Assesses the situation with the emergency team leader. If needed, the emergency team leader orders the emergency team into action.

- Brief public services on the hazards associated with the transported / delivered gas or chemical.
- Handles the media if the company spokesperson is not at the scene.
- Once the emergency situation has been dealt with and is under control, makes the announcement ending the emergency.
- Ensures a proper clean-up operation is done and that the area is safely and environmentally stable to return to normal.
- Gathers data for full incident investigation.

Emergency team leader

- Assembles the emergency team members and briefs them on the situation (either at the plant or at the scene of the incident). Assesses the situation and plans how best to tackle the emergency situation.
- Directs the emergency response team, as required. Co-ordinates with the public emergency teams.
- Reports progress to the emergency controller continuously until the situation is under control.
- Takes control of the recovery (clean up) operation; gets additional assistance or equipment from the plant or from public services (such as tow trucks and cranes) if required.

Emergency co-ordinator

- Be the central contact between the emergency team and public services.
- Provides information to top management and sales department.
- Performs any other tasks as instructed by the emergency controller.

Company spokesperson

The company spokesperson is the one and only person in the organisation who will deal with the media and provide screened information to outsiders. The only exception is the emergency controller at the scene, who can give preliminary, concise information if the situation demands.

Emergency response team

The emergency response team can be organised as a single team, but it is recommended that it be divided into:

- Mechanical team
- Emergency response team
- First aid team

Emergency advisor

The emergency advisor(s) are the experts to provide the proper advice on responding to the emergency from the aspects such as technical, hazardous material handling, medical treatment etc.

A chart identifying the team members should be made available at the scene of the incident. An example is given in the Appendix.

It is very important that all team members be well trained and back-up members are clearly identified. There should be regular emergency drills with different scenarios so that the team can

gain experience in dealing with different emergency situations and the usage of emergency equipment.

Team members should be selected on the following criteria:

- Medically certified where required.
- Can be easily contacted both on and off duty.
- Ability and willingness to attend drills and training.

An overview of the emergency response activities flow is shown in Figure 2.

Figure 1: Transport emergency team organisation at the scene of incident

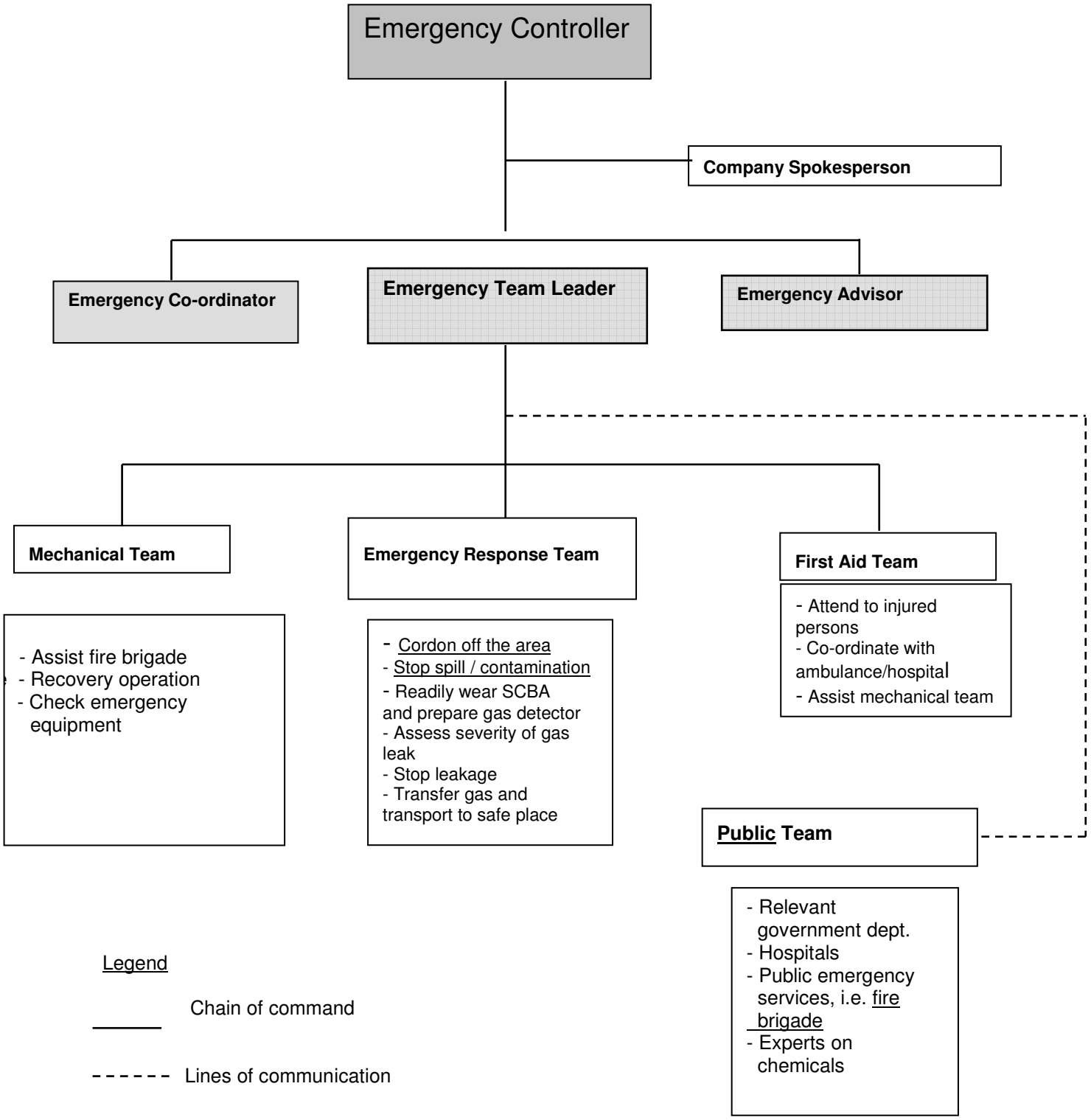
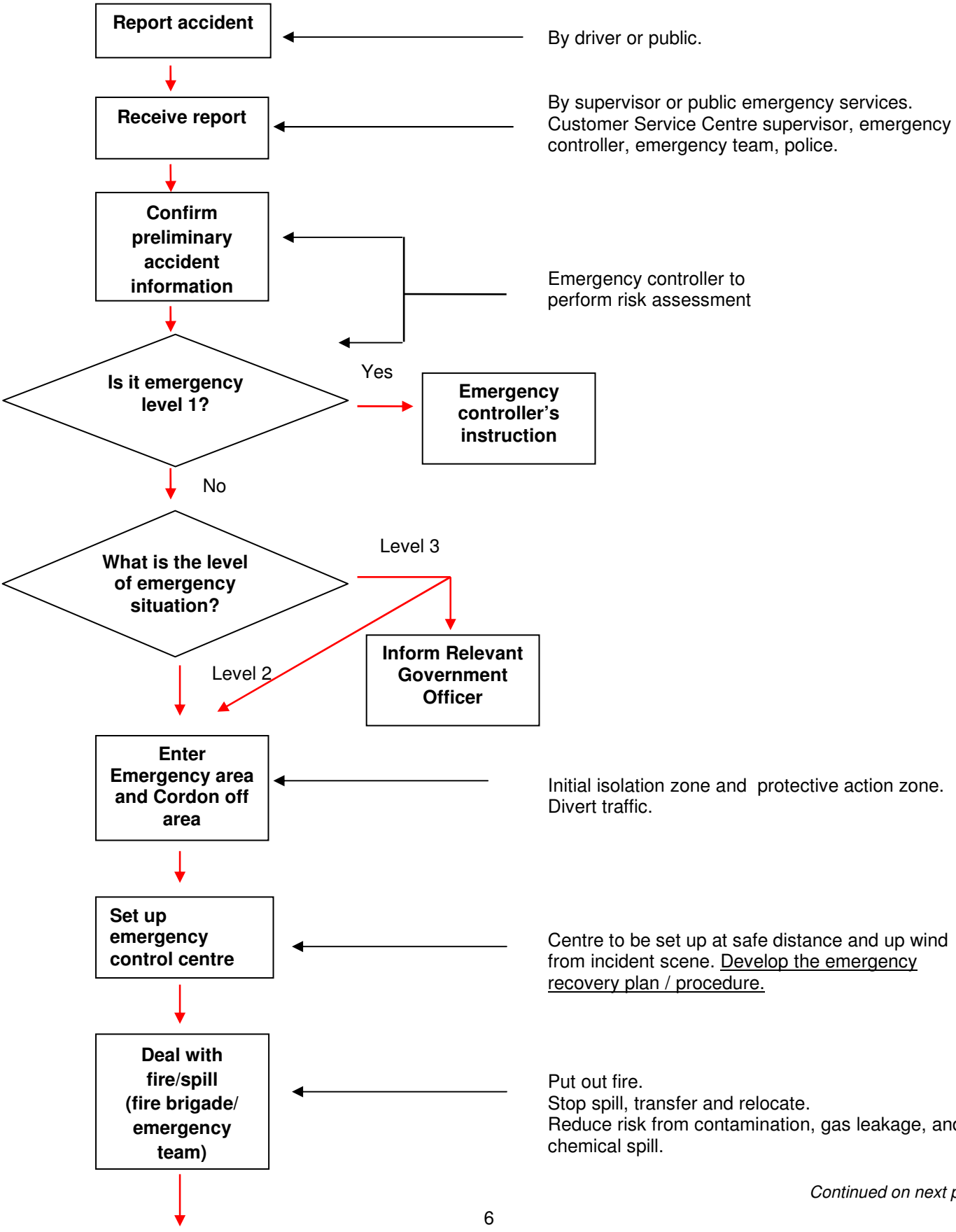


Figure 2: Emergency response flow diagram



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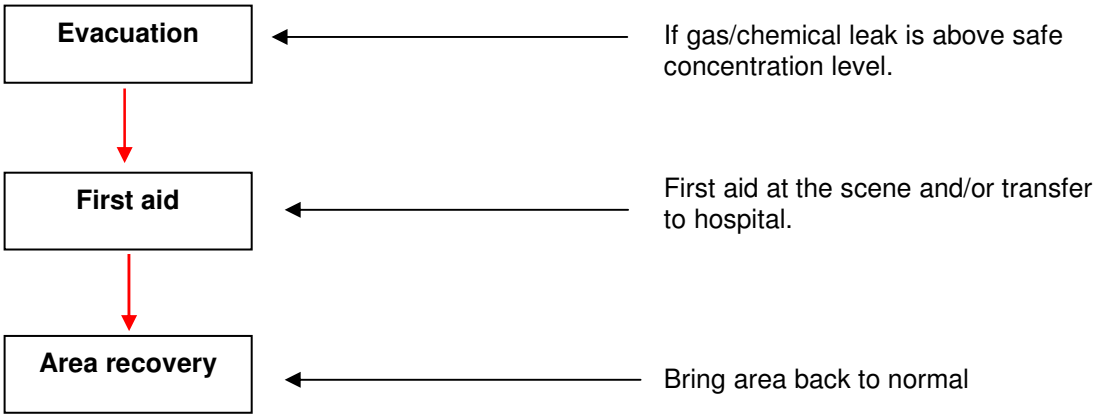


6 Incident levels and emergency controller

Incidents and emergency situations can be divided into three severity levels:

- **Level 1** - Minor incident where there is no detrimental damage and the situation is unlikely to escalate into a major transport / delivery incident.

  The supervisor or transport manager can handle the incident with the insurance company and there is no need to deploy the emergency team. Statistically, most transport incidents are in this level.

- **Level 2** - Serious transport / delivery incidents such as tanker rollover, liquefied gas spill, gas release, or serious vehicle collision with multiple injuries.

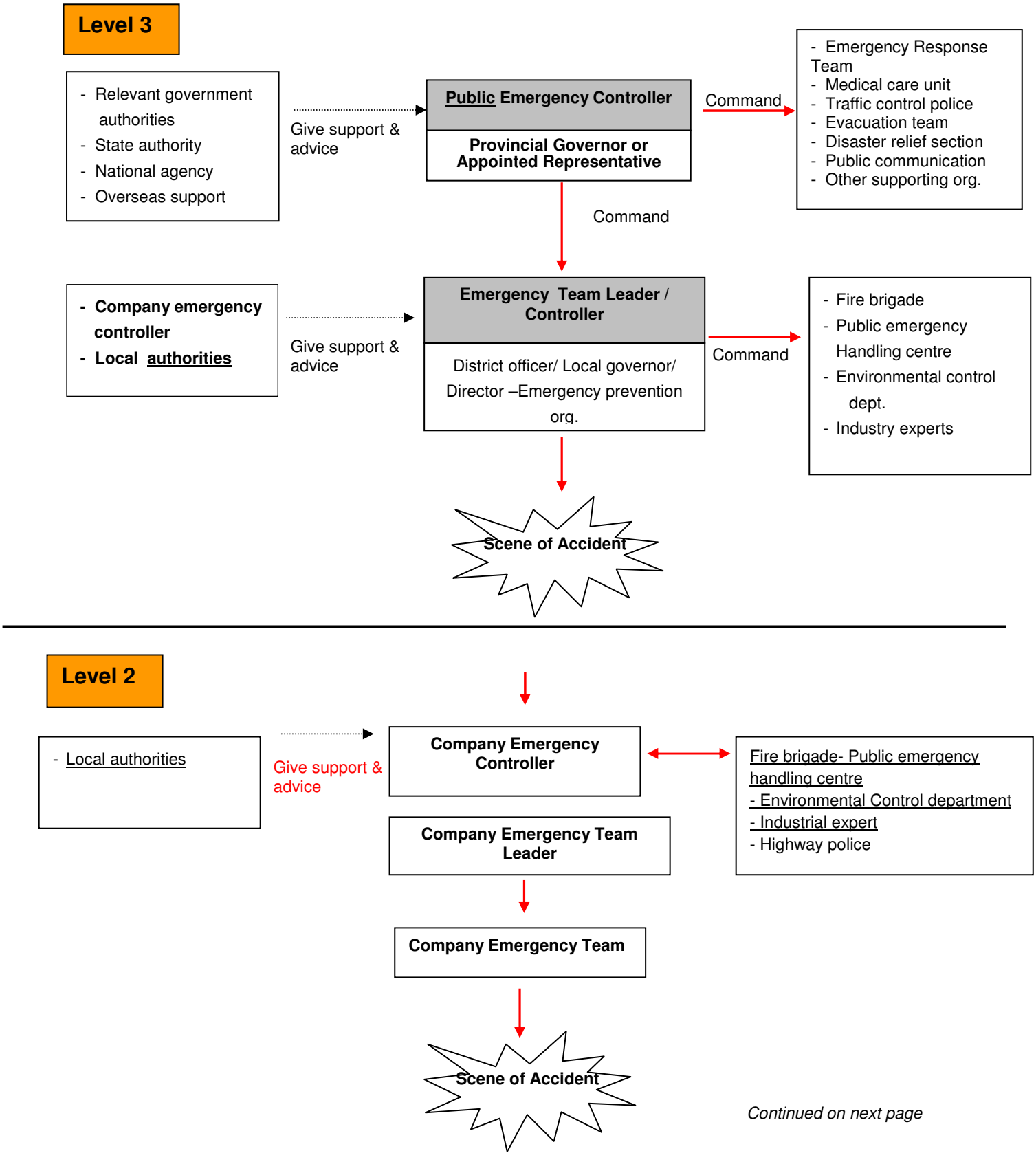
  The emergency controller deploys the emergency team; the situation can be controlled under the command of the emergency controller with / without involvement from government or public emergency services, i.e. the fire brigade, police or ambulance service.

- **Level 3** - Serious incidents that could potentially escalate into a national disaster emergency situation, such as a liquid oxygen tanker rollover in a town centre with major gas leakage.

  In such events, the highest ranking government officer who arrives (usually the provincial governor, district governor or head of local disaster prevention agency) will take over as the emergency controller, after being briefed on the situation by the company emergency controller. The company emergency controller will then become the emergency advisor and the company emergency team also stands down but will be ready to assist if ordered by the new emergency controller, and will work closely with the public emergency teams.

Figure 3 gives an overview of the three levels of incidents and the interactions of the controller at each level with the other groups involved in the response and recovery work.

Figure 3: Emergency handling and authorized controller at each level



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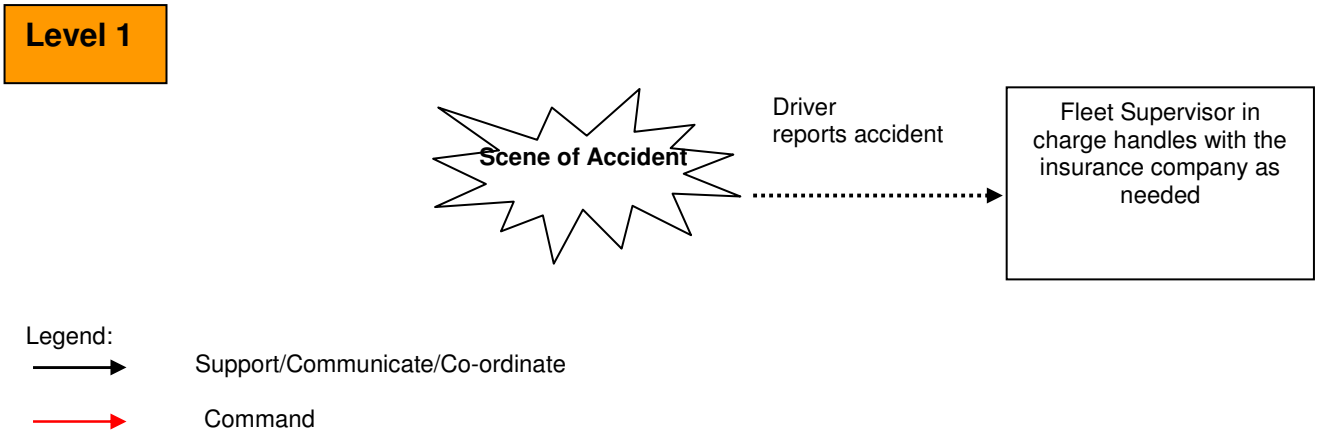


7 Media relations

Coping with substantial media attention can divert vital resources away from the handling of an emergency. However, if it is managed unprofessionally the company's public image may be adversely affected.

Two important objectives of an emergency communications plan to the media are:

- To provide a reliable source of accurate information: give quick, clear, and accurate data to all interested parties, including the media and the authorities, communities and company employees.

- To make known all the efforts being made to control the situation and minimize the consequences. An underlying objective should be to manage communication of the incident so that the positive elements are stressed and the negative elements are under control.

Caution: Information in this section is not enough for dealing with the media. It is strongly recommended that multiple persons in the emergency team be trained professionally.

7.1 The company spokesperson

The company spokesperson is the one and only person in the organisation who will deal with the media and provide screened information to outsiders. To avoid the confusion of different information coming from different sources, make known throughout the organisation that in a crisis or emergency situation, only the company spokesperson can communicate with the media and other external parties.

- Such a person needs to be trained to support the proposed actions.
- Standard information package containing data such as the company profile, properties and risks associated with the gas being transported, production process, company safety standards, and transport safety system should be readily available.

7.2 Communicating with the media

The company spokesperson may have to communicate with the media in three types of situations:

- The first public announcement

Interviews

- Press conferences

It is important that a company spokesperson confronted with the media follows these simple rules:

a) Make a clear, complete, factual and truthful statement:
b) Do not underestimate the seriousness of the crisis.
c) Do not overestimate your resources for mastering the situation.
d) Adopt a positive attitude towards journalists; remember you are not on trial.
e) Behave in a responsible, positive and caring way. Do not try and pass the blame to public authorities, contractors, etc, but take care not to imply legal responsibility.
f) Do not bluff. If you do not know, say "I do not know ….. but I'll find out."
g) Do not be drawn by provocative questions, just go over the information calmly and firmly.
h) Do not speculate on cause, consequences, delays, costs, etc. "This point is being investigated" is an acceptable reply.
i) Only use diagrams and photos which you have checked and which are clear and appropriate.
j) Any press conference should preferably be held by a team. It should be managed and brought to an end when it is clear that all useful information has been given.

8 Recovery after the incident

- **Area recovery**

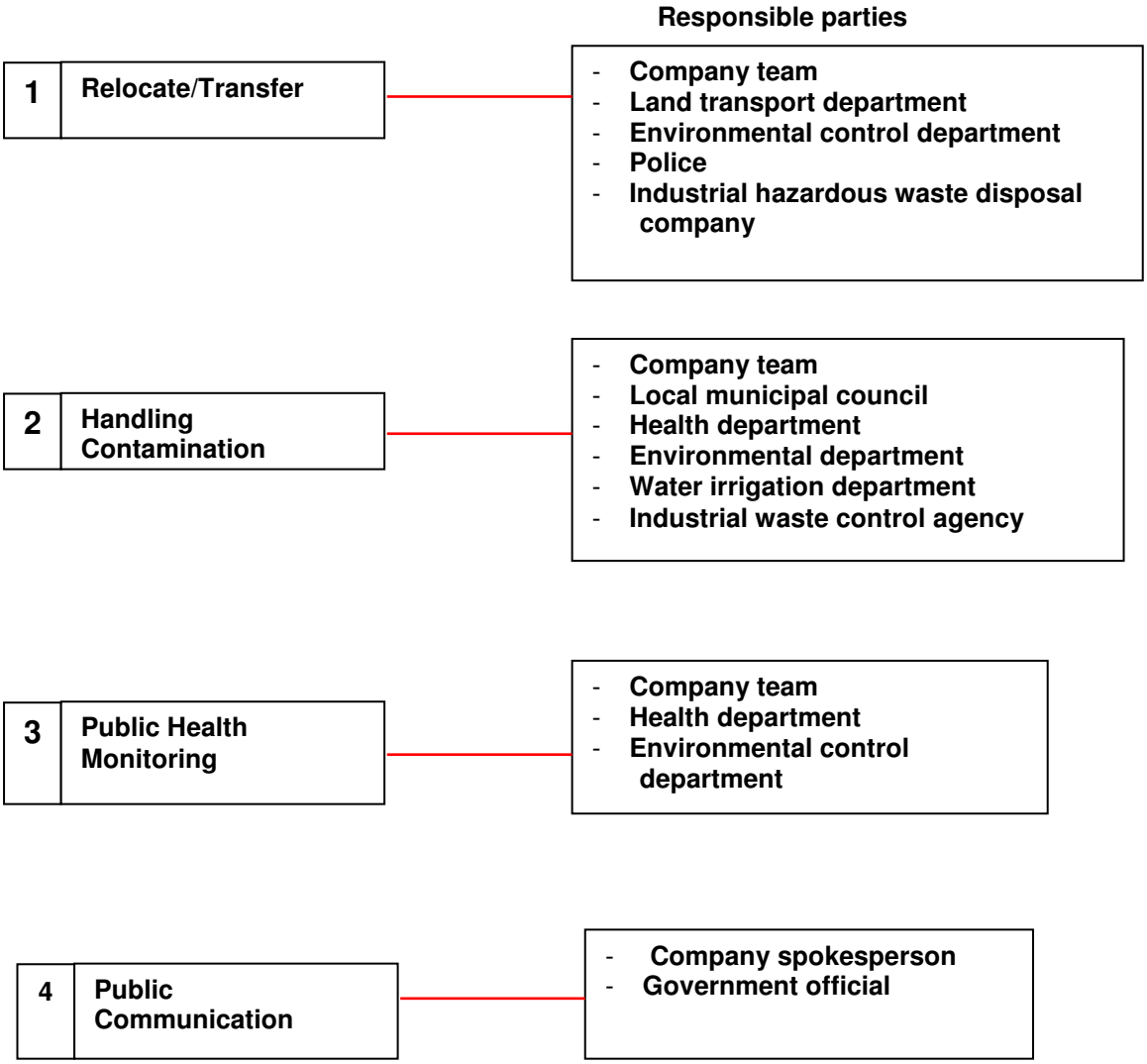
After an emergency situation is dealt with and the emergency controller has announced an end to the emergency situation, there needs to be an area recovery operation in order to bring everything back to normal as soon as possible. Ensure that any chemical spill or toxic waste is cleaned up properly and not left in the area. This includes water from the fire hydrant if it has been contaminated; care must be taken to prevent or minimize its flow into nearby waterways which could have an environmental degradation effect. If the toxins released may have a harmful effect on the health of the local people, then health checks need to be conducted by a qualified health expert or doctor.

- **Vehicle recovery**

If a big vehicle such as a tanker is overturned, care must be taken and an expert member of the emergency team must give proper instructions to the vehicle recovery operator to ensure no incident occurs during the recovery operation. The person supervising must also ensure that proper equipment (such as the correct size of crane and slings) is used and the operator is briefed on the product properties, hazards, safety precautions and PPE required.

Figure 4 shows the functions of various groups of people involved in the recovery work.

Figure 4: Simplified recovery plan after major spill



9 Emergency contact list and essential information

It is critical to the success of any transport emergency response that the appropriate contact list and information needed to deal with emergencies are regularly updated, readily available and tested periodically.

Internal contact list

The contact list should be reviewed carefully to ensure that it includes all personnel who may be involved when an emergency occurs.

It should include the following personnel at the very least:

- Transport manager and supervisors
- All members of the emergency team
- Key safety department personnel

- Key senior managers
- Key personnel from human resources department
- Key technical personnel from Distribution department
- Key product specialists
- All drivers
- All vehicle maintenance staff

All personnel on the contact list must understand their responsibilities and roles during an emergency, which must be treated with the highest priority.

External contact list

External contact numbers to be made readily available include the following:

- Main police stations
- Fire stations
- Local hospitals and ambulance service
- Local heavy vehicle recovery agents (for cranes, tow trucks, etc.)
- Transport safety centre
- Key public emergency agencies
- Health and safety experts
- Environmental agency
- Local authorities
- Equipment (such as vehicle, trailer, tube trailer, tank) vendors / contractors

Essential information for drivers and emergency team

Information needed in the event of an emergency must be readily available in all vehicles transporting dangerous goods or the emergency team... Examples of such information include:

- Material Safety Data Sheets (MSDS)
- Emergency Response Guide Book
- Transport Emergency Cards (TREMCARDS)
- HAZCHEM, ADR Code, UN Number, NFPA Hazard Diamond sign or TEIP – Transport Emergency Information Panel)
- Proper hazardous goods labelling

10 Emergency equipment

Appropriate transport emergency equipment must be available and appropriately stored to enable them to be transported to the scene of emergency within a specified time. The equipment required will vary depending on the hazards associated with the type of dangerous goods transported, but should include the following, at the very least:

- Emergency vehicle
- Two sets of SCBA and spare air tank
- Appropriate type of gas detector and spare sensors
- Chemical suits
- Spill control kit
- Portable fire extinguishers
- Safety vests
- Walkie talkies
- Tools such as hammer, crowbar, axe etc
- Safety cones and triangles
- PPE fit for the product and emergency

In addition, each member of the emergency team should carry a small transport emergency response kit containing:

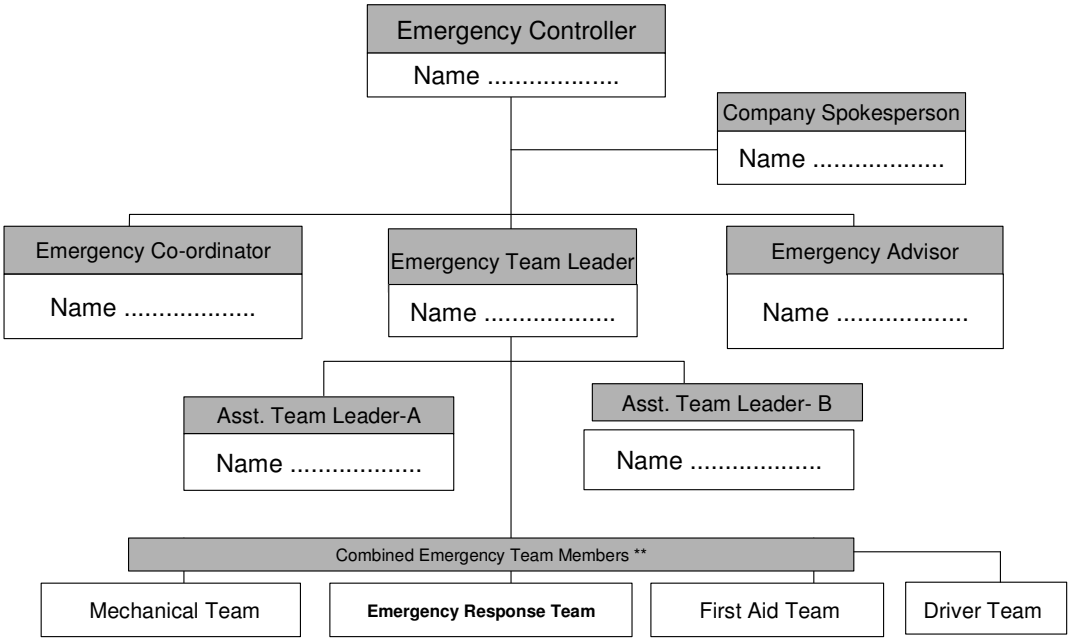
- Hard hat
- Safety goggles
- Cryogenic gloves
- Safety shoes
- Spark-proof torch
- Reflective vest
- Emergency contact list

11 References

AIGA 017/05: Labelling of gas containers (including associated equipment), www.asiaiga.org
EIGA 81/06: Road vehicle emergency and recovery, www.eiga.eu

Appendix: Transport emergency team organisation chart

TRANSPORT EMERGENCY TEAM ORGANIZATION CHART



** Please refer to detailed chart