PART II

PREPAREDNESS

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1. PLAN DOCUMENTATION

The LPG Emergency Response Assistance Plan consists of three Parts:

Part I **Management**

Addresses the overall organization and administration of the Plan; outlines the Corporation's methods for handling participation in the Plan, insurance, Plan costs and expenses, activation policy and management policies. Part I outlines how the business is run.

Part II **Preparedness**

Describes the Corporation's processes for preparedness and continual improvement. It includes response capability, methods for selecting and training personnel, defines equipment and training required. Potential scenarios are included outlining the response that would be provided to certain LPG emergencies. Part II describes what is in place to prepare for an emergency.

Part III **Operations Operational Details**

Sets out the Corporation's procedures for activating the Plan and discusses actual response activities: initiation, actions, site stabilization and post-incident actions and, "stand down procedure". Part III outlines what will be done at an incident scene.

The words "shall" and "will" are used in Parts I, II, and III to indicate a mandatory requirement.

The Plan contains policies and procedures for all of LPGERC's processes and as such any changes made are subject to the approval of the Board of Directors.

2. RESPONSE CAPABILITY

The basis of the LPG Emergency Response Corp. Plan is its network of RMAs and Response Teams.

The Corporation has determined that a RMA and/or Response Team will make an effort to reach an emergency site within a reasonable time frame under normal conditions.

If the RMA and/or the Response Team located closest to the emergency site is unable to respond, the Response Manager activates the next closest RMA and/or Response Team.

2.1 Risk Areas

Based on population density and volume of traffic moved, the Corporation has established its response capabilities. In general these boundaries are:

- the United States border to the south, and
- below the 57th Parallel to the north for the western provinces and below the 55th Parallel to the north for Ontario and Québec.

2.2 Geographical Response Capability

The Map (Appendix E) indicates the approximate locations of Remedial Measures Advisors and Response Teams. All RMAs and Response Teams may use any approved mode of transportation necessary to meet a reasonable time frame under normal conditions. These locations are subject to change.

2.3 General Capability

To provide emergency response coverage for Plan Participants, the approximate number of LPG Emergency Response Corp. responders, strategically located across Canada, is:

- 35 RMAs;
- 9 Response Teams, and
- 3 equipment caches.

The Corporation does not perform environmental remediation.

3. RESOURCES AND PERSONNEL

Working under the direction of the Board of Directors and with advice from the Operating Committee, the Vice President & GM and staff are responsible for coordinating the activities related to preparedness. Training is identified in Appendix G.

3.1 Response Centre

The Corporation maintains a dedicated, 24-hour per day, 7-days per week Plan activation telephone number. The activation number at the Response Centre is answered by Response Managers. The Response Centre is capable of communicating in English, and in French through a conference call with CANUTEC.

Calls received on the emergency activation telephone at the Response Centre are recorded and a logbook is kept of all calls received. The emergency response operations shall be activated only by a Response Manager or in the unlikely event that the Response Centre cannot be contacted, the HBC or designate (Part III, 4.1).

3.2 Response Manager

Response Managers collect relevant information associated with the incident and relay this information to the RMA and/or the Response Team, as well as the Home Base Coordinator. No technical information is supplied by the Response Manager (Part III, 4.3).

3.3 Remedial Measures Advisor (RMA)

RMAs are knowledgeable and experienced in the handling of LPG. RMAs are retained by the Corporation to carry out the duties and responsibilities of an RMA (Part III, clause 4.3).

3.4 Response Team

Response Teams are composed of a Response Team Leader and Response Team Members who have knowledge, experience and access to equipment in the handling of LPGs (Part III, clause 4.3).

3.5 General Selection Criteria

In selecting RMAs and Response Teams, the Corporation may consider the following:

1. **Practical experience** - related experience with LPG,transportation, or handling and knowledge of day to day operations within one of these industries; (Appendix I)
2. **Product knowledge** - knowledge of the physical and chemical properties of LPG; (Appendix I)
3. **Physical condition** - have the ability to perform the required activities of the response; (Appendix I & J)
4. **Equipment knowledge** - familiar with container systems used in the transportation and storage of LPG. Have a working knowledge of equipment used to transfer, flare, lift or remove damaged containers;
5. **Equipment availability** – equipment required as detailed in Appendix F;
6. **Fire fighting awareness -** awareness of various types of fire fighting equipment used for LPG fires, and
7. **Plan Participant** – candidate is employed by a member company.

3.6 Home Base Coordinator

The Home Base Coordinator has extensive knowledge of the Plan as well as working knowledge of the handling, storage and transportation of LPG.

4. EQUIPMENT STANDARD

All Response Personnel shall have appropriate personal protective equipment (PPE) and shall have, as a minimum, the equipment listed in Appendix F when responding to a site of an LPG emergency or when participating in hands-on training courses.

5. TRAINING STANDARD

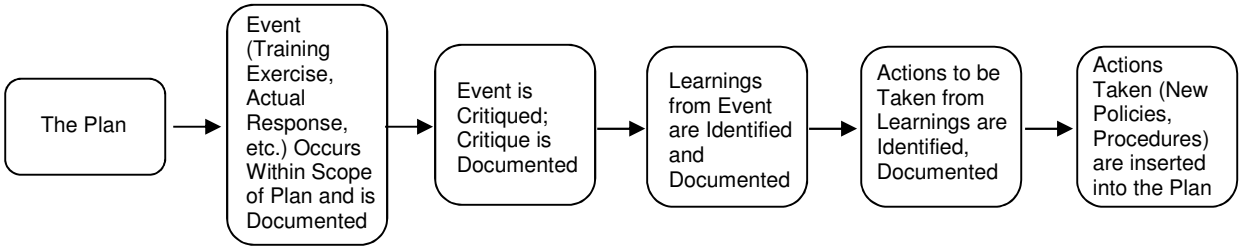
In order to qualify and to remain qualified, all RMAs, RTLs and RTMs shall take, at their own expense or that of their employer, courses and other training as determined by the Corporation. Training Standards and requirements are provided in Appendix G.

Records of training are maintained and updated by the Corporation.

The Corporation may make training courses available to others.

6. PREPAREDNESS REVIEW

The Corporation follows the protocol described in the flow chart below to verify the capability and effectiveness of the Plan.



Details on the verification process are included in Appendix H.

7. POTENTIAL INCIDENT SCENARIOS

SCENARIO 1

Tank Truck (Product Transfer)

Scenario:

An LPG cargo liner containing 38 m^3 (38,000L) of propane goes out of control (due to black ice) while traveling around a bend in the highway. The trailer and tractor plunge 10 metres down an embankment and stop at the edge of a lake. During the downward plunge, a valve is sheared off the tank. Product may be leaking; the Incident Commander is unsure. Driver abandoned tractor before it went over embankment; driver is shaken up but unhurt. There are lakefront residences 300 metres

from the location of the possibly damaged or leaking tank. The Police call CANUTEC, who contacts LPGERC.

Consequences:

- Traffic stopped or diverted
- Evacuation of lakefront residences
- Potential of tank sliding into lake
- Risks to responders from
  - potential fire or explosion
  - potential asphyxiation
- Potential ignition sources
- Potential of vapour cloud traveling
- Integrity of tank - potential of rupture, rapid relief
- Possible environmental damage (from tractor motor fuel)
- Terrain creates response difficulties

Actions:

- Response Manager activates Plan on behalf of Plan Participant for whom trucker is hauling
- Response Manager dispatches closest available RMA to incident site
- Response Manager notifies Plan Participant and Home Base Coordinator
- RMA drives to incident site; arrives in 3 ½ hours
- RMA advises Incident Commander on traffic control, site security, further evacuation, potential ignition sources
- RMA proceeds to incident location, assesses site (using binoculars, gas tester, etc.)
- RMA assesses damage - determines that there is a slight leak of propane from the excess flow valve, and that the best remediation method is to transfer, flare and purge
- RMA requests that Response Manager activate closest Response Team to perform remediation activities
- Response Team arrives 7 hours from time of activation
- Prior to arrival of Response Team, RMA continues to work with and advise Incident Commander regarding site security and gas monitoring
- Response Team, RMA and Incident Commander discuss situation, jointly assess damage, develop and agree on plan of action and Response Team performs remediation activities
- Response Team and RMA ensure that Plan Participant will properly dispose of damaged tractor and trailer
- Response Team and RMA obtain release from Incident Commander, Response Manager and Plan Participant (if on site)

SCENARIO 2

Tank Car (Product Transfer)

Scenario:

Multi-car, multi-product derailment on railroad main line. Two tank cars loaded with propane/butane mix; not leaking, but there is undetermined tank damage. A third car is a residue car, last contained propane. Three cars contain chemicals (sulfuric acid). Location is several kilometres from a populated area, less than 1 km from Highway #1. Railroad calls LPGERC on behalf of Plan Participants whose ERAP numbers are on waybills for all LPG cars.

Consequences:

- Fire/explosion
- Toxic reaction
- Traffic rerouting on Highway #1
- Railroad shut down; train traffic disrupted
- Safety hazards to responding personnel
- Environmental hazards from product mixtures
- Toxic hazards from product mixtures
- Tank failure, leak, rupture

Actions:

- Response Manager activates Plan on behalf of Plan Participants shown on shipping documents
- Response Manager dispatches closest available RMA and closest Response Team
- Response Manager informs the Plan Participant and Home Base Coordinator
- RMA arrives at scene in 1 hour
- RMA communicates with Incident Commander (railroad personnel) and other commodities responders on site
- In cooperation with other commodities responders, RMA assesses site; cannot completely determine damage to undersides of mix cars; determines residue car has no damage
- Jointly, responders representing all commodities involved plan actions and agree that chemicals should be handled first and LPG handled after chemical cars have been unloaded
- Response Team arrives on site 10 hours after having been dispatched
- Response Team stands by while chemical cars are transferred
- Response Team (after obtaining agreement on methods from RMA and others on site) transfers product from damaged LPG tank cars into residue cars that have been brought in by the railroad
- RMA and Response Team obtain release from Incident Commander, Response Manager and Plan Participants (if on site); railroad finalizes cleanup

SCENARIO 3

Stationary Tank (Product Transfer)

Scenario:

During road grading, bulldozer knocks over tank onto rock (7,570 litre (2,000 USG) tank in storage yard in medium-sized town in northern area). Slight, slow leak on valve; suspected crack due to impact. Identifiers on tank are that of a Plan Participant. Plan Participant representatives not available. Fire Department contacts CANUTEC who calls LPGERC.

Consequences:

- Fire/explosion; tank failure; vapour cloud
- Evacuation of town residents
- Streets closed down; trade disrupted
- Safety hazards to responders
- Remote area hinders prompt arrival of responders

Actions:

- Fire Department confirms that tank is identified as that of a Plan Participant
- Response Manager dispatches RMA
- Response Manager informs Plan Participant and Home Base Coordinator
- Because of remoteness of area and desire of Fire Department for speedy assistance, RMA charters helicopter and arrives on scene in 2 ½ hours
- RMA meets with Fire Department on scene, assesses site, confirms that product is still leaking
- RMA outlines plan of action and Fire Department agrees: rig up flare stack and flare remaining product
- RMA performs remediation procedure while Fire Department applies water fog to area of site
- RMA gas monitors area, determines that no vapours remain
- RMA is released by Incident Commander, Response Manager and Plan Participant (if on site)

SCENARIO 4

Tank Car (Vent and Burn)

Scenario:

A train derailment caused a tank car to break free from a lengthy freight train. The tank car rolled down an embankment and came to rest among some large rocks and boulders. The first indication is that, although the car is badly damaged, there is no sign of leaks. The Volunteer Fire Department is on site, along with railway representatives. Transport Canada and Environment Canada personnel are en route.

Consequences:

- Potential failure of container and subsequent fire/explosion
- Need for evacuation of any persons in area
- Safety hazard to responders due to tentative position of car
- Question as to whether evacuation of tank car can be handled safely

Actions:

- Incident Commander confirms identity of consignor from railroad train consist; RM confirms that consignor is a Plan Participant
- RMA and Response Team are dispatched to site
- Response Manager advises:
  - Plan Participant
  - Home Base Coordinator
  - Transport Canada
- After site assessment by RMA/Response Team Leader (RTL) it is determined that:
  - structural damage to the tank car is sufficiently severe to preclude it being re-railed or moved to another unloading site safely
  - further transferring, flaring or venting of product is impractical; car cannot be repositioned safely to provide access to required valves
- A meeting is convened among:
  - Transport Canada representatives
  - Environment Canada
  - Fire Chief
  - Police Department
  - Carrier
  - LPGERC representatives (RMA/RTL)
  - Plan Participant
  - Home Base Coordinator
- As a result of the meeting it is agreed that the best option is to use a “vent and burn” technique. A controlled opening will be created in the damaged container by placing explosives strategically on the tank
- The released contents will flow to a pit which will be dug beside the damaged container, and will then burn off

- Vent and burn is a controlled operation that is outside the training requirements of the LPGERC responders (RMA/RTL). Therefore it is agreed that 3rd party personnel who are trained in "vent and burn" techniques will be brought in
- Meeting participants agree that:
  - Risks of operation adversely affecting other tank cars involved in derailment (particularly those containing hazardous materials) are acceptable
  - Since the product which is to be vented and burned is LPG, the environmental impact is not high
- It is agreed that the vent and burn procedure will proceed, with the following safety precautions being taken:
  - Local residents will be evacuated. Evacuation distances will be based on the risk of a possible violent rupture which might project fragments from the tank car
  - Only an expert will select and place charges
  - Only those persons needed to set the charges will be allowed on site
  - Air traffic control will impose air traffic restrictions over the site
  - Sufficient firefighting capability (including aerial forces) will be standing by
  - The Incident Command System will be used to ensure close coordination and liaison among all participants
- It is further agreed that while the actual vent and burn process is beyond the scope of the LPGERC responders, they will stand by for the duration of the incident to provide advice and assistance
- The vent and burn operation is successfully completed
- When all of the LPG in the damaged tank car has been removed and burned off, the RMA and Response Team are released by the Incident Commander, Response Manager and Plan Participant (if on site) and leave the scene
- The railroad arranges for the removal of the damaged, now empty, car