

Appendix B: Spill Control Procedures

Building Name:

Building Address:

Prepared by:

Date:

Reviewed by:

Date:

Introduction

As per the Ontario Fire Code, Reg. 213/07 as amended, Sentence 4.1.6.4 (1) states that a spill control procedure shall be approved and implemented for any occupancy where flammable or combustible liquids are stored, handled, processed or used.

As per Sentence 4.1.6.1 (2) the spill control procedure referred to in Sentence (1) shall include:

- (a) suitable operating procedures to prevent leaks and spills from piping, pumps, storage tanks or process vessels,
- (b) ventilation,
- (c) control of ignition sources,
- (d) spill containment and cleanup (such as dikes and spill control agents such as sand),
- (e) personal protective clothing or equipment that should be used (such as rubber gloves, rubber boots and self-contained breathing apparatus),
- (f) chain of command including notification of affected agencies and management,
- (g) a preventive maintenance program, and
- (h) training for new staff within 3 months of their being hired and for experienced staff every 6 months.

As per Sentence 4.1.6.4 (3) Spill control procedures shall be prominently posted and maintained where flammable or combustible liquids are stored, handled, processed or used.

Additionally, the Ontario Fire Code, Reg. 213/07 as amended, Article 4.1.5.6. states the following:

The requirements of Section 2.8 shall apply to buildings and open areas where the quantities of flammable liquids and combustible liquids exceeds 500 L in total or exceeds 250 L of Class I liquids.

As per Sentence 4.1.6.1.(4) The fire safety plan required in Article 4.1.5.6. shall include measures to be taken to direct overflow of spilled liquids and fire fighting water away from

- (a) buildings,
- (b) adjoining properties,
- (c) means of egress,
- (d) air intakes or openings that could permit vapour entry into the building,
- (e) fire alarm control panels,
- (f) fire department access routes,
- (g) valves controlling the water supply for fire fighting, or fire protection systems,
- (h) fire department pumper connections or wall hydrants,
- (i) isolation valves controlling processes, and
- (j) valves controlling the flow of flammable liquids or combustible liquids.

Emergency Contacts:

Complete the following table with the appropriate contact information for your facility:

Contact	Phone Number
Owner's Name:	
Manager's Name:	
On-site Manager/Spill Coordinator:	
Fire/Police/Ambulance	9-1-1
London Fire Department Dispatch (Non-emergency)	519-661-5615
Fire Prevention (Non-emergency, day-time)	519-661-2489 x4565
Ministry of the Environment	416-325-4000 OR 1-800-565-4923
Canutec (Emergency) Information	1-888-226-8832 OR 1-613-996-6666 1-613-992-4624
Environment Cleaning Company:	
Spill Kit Refills/Maintenance:	

Definitions

Access to Exits: That part of a means of egress within a floor area that provides access to an exit serving the floor area.

Approved: means approved by the Chief Fire Official.

Building: Any structure used or intended for supporting or sheltering any use or occupancy.

Building Code: Any version of the Ontario Building Code that was in force at any time since it was made under The Building Code Act, 1974, the Building Code Act of the Revised Statutes of Ontario, 1980, the Building Code Act of the Revised Statutes of Ontario, 1990, the Building Code Act, 1992 or a successor to the Building Code Act, 1992, and, where a specific version of the Building Code is referred to, that version of the Building Code.

Chief Fire Official: means the assistant to the Fire Marshal who is the Municipal Fire Chief or a member or members of the fire department appointed by the Municipal Fire Chief under Subsection 1.1.8. or a person appointed by the Fire Marshal under Subsection 1.1.8.

Class I Liquids: Flammable liquids shall be Class I liquids, and shall be subdivided into

- (a) Class IA liquids, which are those having a flash point below 22.8°C and a boiling point below 37.8°C,
- (b) Class IB liquids, which are those having a flash point below 22.8°C and a boiling point at or above 37.8°C, and
- (c) Class IC liquids, which are those having a flash point at or above 22.8°C and below 37.8°C.

Closure: A device or assembly for closing an opening through a fire separation such as a door, a shutter, wired glass or glass block and includes all components, such as hardware, closing devices, frames and anchors.

Combustible liquid: means any liquid having a flash point at or above 37.8 °C and below 93.3 °C.

Exit: That part of a means of egress, including doorways, that leads from the floor area it serves to a separate building, an open public thoroughfare or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare.

Fire-Protection Rating: The time in hours or fraction thereof that a closure, window assembly or glass block assembly will withstand the passage of flame when exposed to fire under specified conditions of test and performance criteria, or as otherwise prescribed in the Building Code.

Fire-Resistance Rating: The time in hours or fraction thereof that a material or assembly of materials will withstand the passage of flame and the transmission of heat when exposed to fire under specified conditions of test and performance criteria, or as determined by extension or interpretation of information derived therefrom as prescribed in the Building Code.

Fire Separation: Means a construction assembly that acts as a barrier against the spread of fire and may or may not have a fire-resistance rating or a fire-protection rating.

Fire Walls: A fire separation of noncombustible construction that subdivides a building or separates adjoining buildings to resist the spread of fire that has a fire-resistance rating as prescribed in the Building Code and that has structural stability to remain intact under fire conditions for the required fire-rated time.

Flammable liquid: means a liquid having a flash point below 37.8 °C and having a vapour pressure not more than 275.8 kPa (absolute) at 37.8 °C as determined by ASTM D 323, "Vapor Pressure of Petroleum Products (Reid Method)".

Flash point: means the minimum temperature at which a liquid within a container gives off vapour in sufficient concentration to form an ignitable mixture with air near the surface of the liquid.

Floor Area: The space on any storey of a building between exterior walls and required firewalls and includes the space occupied by interior walls and partitions, but does not include exits and vertical service spaces that pierce the storey.

Major Spill: A major spill is one that cannot be contained safely with the materials on the site, threatens safety to life, and/or threatens to enter the sewer system or travel beyond the boundaries of building/property to endanger the environment. The Emergency Services shall be contacted.

Means of Egress: A continuous path of travel provided for the escape of persons from any point in a building or contained open space to a separate building, an open public thoroughfare or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare. Means of egress includes both exits and access to exits.

Minor Spill: A minor spill is one that usually presents little or no hazard to person or property, and is small enough to be safely cleaned up using the emergency spill kit.

Noncombustible Construction: That type of construction in which a degree of fire safety is attained by the use of noncombustible materials for structural members and other building assemblies.

Partitions: An interior wall, one storey or part of a storey in height, that is not load-bearing.

SDS (Safety Data Sheets): A compilation of information on the identity of hazardous chemicals, health, and physical hazards, exposure limits, and precautions.

Storey: That portion of a building that is situated between the top of any floor and the top of the floor next above it, and where there is no floor above it, that portion between the top of the floor and the ceiling above it.

Vapour Pressure: Means the pressure exerted by a liquid as determined by ASTM D 323, "Vapour Pressure of Petroleum Products (Reid Method)".

Vertical Service Spaces: A shaft oriented essentially vertically that is provided in a building to facilitate the installation of building services, including elevators, refuse chutes, linen chutes and mechanical, electrical and plumbing installations.

Spill Control Procedures

This section is meant to be a guideline and can be modified as necessary by the owner/operator in consultation with the Fire Prevention Inspector:

1. The on-site manager (spill coordinator) will investigate any spill before evacuating the building or contacting any of the emergency contacts listed previously.

2. If the spill is MINOR (meeting the following criteria) it will NOT be considered a significant hazard and evacuation is NOT necessary:

a. Presents little or no hazard to person or property,

b. Is small enough to be safely cleaned up using the emergency spill kit, and/or

c. Is located in an open area where the vapours are being dispersed

d. Minor leaks or spills are normally reported by individuals detecting:

i. An alarming or offensive odour, and/or

ii. A small pool of liquid on the ground

****NOTE:**** If the vapours from the minor leak or spill can collect in a confined space sufficiently to form an explosive mixture it will be considered a significant hazard and an evacuation must take place immediately along with notifying the London Fire Department at 9-1-1 and other emergency contacts as per the Emergency Contact list on site.

3. If the spill is MAJOR (meeting the following criteria) an evacuation MUST take place immediately along with notifying the London Fire Department at 9-1-1 and other emergency contacts as per the Emergency Contacts List:

a. Cannot be contained safely with the materials on the site, and/or

b. Threatens to enter the sewer system or travel beyond the boundaries of building/property to endanger the environment.

c. Major leaks or spill are normally reported by individual detecting:

i. The existence of large vapour cloud, and/or

ii. A large pool or liquid on the ground.

Clean Up and Disposal of Flammable/Combustible Waste

The disposal of waste material used to clean up or contain a spill or leak of flammable/combustible liquid is extremely important. All disposal actions must be in accordance with Part X of the Environmental Protection Act.

The following steps should be followed in an attempt to clean up a spill or leak in a safe and secure manner.

The following will be done once the spill has been contained:

- 1) Apply absorbent material found within the spill kits to the entire spilled area
- 2) Use a large hand tool (i.e., non-sparking shovel) to ensure that all the liquid has been exposed and mixed with the absorbent material
- 3) Place the used absorbent into a disposal bag and then a non-combustible container. Dispose of material in conformance with the SDS sheet.
- 4) If the spill is major, call the Environment Cleaning Company listed on the Emergency Contact page to clean the exposed area and for disposal of the waste material.

Spill Kit Contents and Information

Location of Spill Kit(s):

Each Spill Kit Contains (list the items contained in the spill kit(s) on site):

Note: The spill kits are only to be used by trained personnel. Spill kits shall be checked on a regular basis to ensure contents are appropriately stocked. After a spill, all used items will be replaced as soon as possible.

For replacement material, please call the provider listed in the Emergency Contacts section.

Example spill kit contents (to be used as a guide, not an exhaustive list):

- Absorbent pads or pillows for use on floors or ground
- Absorbent for use on water
- 50 feet of absorbent socks for use as a dam.
- Non-sparking shovels

- Perforated shovels (for removing absorbent from water)
- 60 L refuse sacks
- 10 L pails
- Brooms
- Vermiculite/absorb-all
- Rubber gloves
- Rubber aprons
- Coveralls
- Rubber boots
- Heavy duty safety goggles
- Respirator with the appropriate canisters/filters

Staff Training

Training of staff is an important part of this plan to ensure the proper containment and disposal of any leaked/spilled liquid. Training of staff on spill procedures will happen as follows:

- All new employees will receive a copy of the spill control procedures.
- Within 3 months of being hired, all new employees will receive spill control procedures orientation/training including, but not limited to:
 - a review of the spill control procedures document,
 - an explanation of the use and location of relevant Personal Protective Equipment (PPE),
 - an orientation to the spill kit locations, contents and use.
- All existing employees will be re-oriented, every 6 months, on the spill procedures as mentioned above or will be part of a Spill Control Drill.

NOTE: The spill procedures will be posted and maintained wherever flammable and/or combustible liquids are stored, handled, processed or used.

Process Explanation

In the space below, provide a brief explanation of the building/area/room where there is potential for a spill to occur, the processes involved, etc.

- What activities and/or operating procedures are being performed in this area that may cause a spill? (i.e. product storage, handling, dispensing, etc.)
- What procedures are in place to mitigate/prevent the risk of a spill?
- Are flammable/combustible liquids being used in process/manufacturing in this area?
- What quantities of flammable/combustible liquids are being used and/or stored?
- What are the provisions for ventilation?
- How are ignition sources controlled/mitigated?

EMERGENCY SPILL PROCEDURES FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

NAME OF COMPANY: _____

IF THE SPILL CANNOT BE SAFELY CONTAINED USING THE SPILL KIT OR IF THE SPILL IS CAUSING A THREAT TO LIFE, EVACUATE THE BUILDING AND CONTACT LONDON FIRE DEPARTMENT AT 9-1-1

UPON DISCOVERY OF A MINOR SPILL

1. ENSURE THE SAFETY OF ALL STAFF AND BUILDING OCCUPANTS

- Warn all surrounding staff and building occupants.
- Notify the On-Site Manager (Spill Coordinator). Act as the Spill Coordinator until his/her arrival
- If unsure of the product, consult the SDS sheets.
- Wear proper Personal Protective Equipment (PPE) contained in the spill kit.
- Attempt to stop the leak or eliminate the source of the spill if safe to do so.
- Eliminate ignition sources and provide natural ventilation.

2. CONTAIN THE SPILL: (If safe to do so)

- Use contents of the provided spill kit(s).
- If necessary, ensure all drains are covered to prevent run-off.
- Attempt to stop the spread of the spill/leak by using absorbent socks to surround the spill.
- Once the spill is contained, attempt to soak it up using an absorbent material.
- Place the absorbent material in an approved container and dispose of it in accordance with the SDS sheet.
- If any leak/spill reaches the drainage system, contact the appropriate authorities as listed in the Emergency Contact section of the procedures

Location of SDS sheets: _____

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **BUILDINGS**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **ADJOINING PROPERTIES**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **MEANS OF EGRESS**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **AIR INTAKES OR OPENINGS THAT COULD PERMIT VAPOUR ENTRY INTO THE BUILDING**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **FIRE ALARM CONTROL PANELS**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **FIRE DEPARTMENT ACCESS ROUTES**:

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **VALVES CONTROLLING THE WATER SUPPLY FOR FIRE FIGHTING, OR FIRE PROTECTION SYSTEMS:**

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **FIRE DEPARTMENT PUMPER CONNECTIONS OR WALL HYDRANTS:**

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **ISOLATION VALVES CONTROLLING PROCESSES:**

Measures to be taken to direct overflow of spilled liquids and fire fighting water away from **VALVES CONTROLLING THE FLOW OF FLAMMABLE LIQUIDS OR COMBUSTIBLE LIQUIDS:**