

PROCEDURE
FOR THE
HANDLING OF FUEL
ON
CONSTRUCTION SITES

Civil Engineering Sector
Labour-Management
Health and Safety Committee



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PROCEDURE FOR THE HANDLING OF FUEL ON CONSTRUCTION SITES

1.0 PURPOSE

- 1.1 To perform safe fueling of vehicles, equipment and vessels from mobile tanks, guard against spills and safeguard the environment from the hazards associated with accidental spills.

2.0 REFERENCES

- 2.1 The following sections of the Liquid Fuels Handling Code 2017 (LFHC) apply specifically to mobile fueling:

- 5.8 Mobile Fueling**
- 6.1.7 Dispensing requirements – Mobile Fueling**
- 9.4. Loading and Unloading (of highway tanks)**

- 2.2 The following sections of the Construction Regulations 213/91 may apply specifically to mobile fueling:

- 43 Flammable liquid, gas**
- 58 Flammable liquid transfer**

- 2.3. Sections 6.1.7.1 and 6.1.7.2 of the LFHC, state:

6.1.7.1. Dispensing shall not take place within

- (a) a building;
- (b) 30 m of a stream, river, lake, canal, or natural watercourse;
- (c) 3 m of a property line;
- (d) 4.5 m of any opening in a building; or
- (e) 3 m from any source of ignition.

6.1.7.2. The requirements of Clause 6.1.7.1, Items (b) to (e), may be modified where the mobile refueller has an approved procedure to prevent the loss or escape of product from

- (a) creating a hazard to public health or safety;
- (b) contaminating a fresh water source or waterway;
- (c) interfering with the rights of any person; or
- (d) entering into a sewer system, underground stream, or drainage system.

3.0 DEFINITIONS

- 3.1 Constructor: As defined in the Occupational Health and Safety Act:

A person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by himself if by more than one employer.

Employer: As defined in the Occupational Health and Safety Act:

A person who employs one or more workers or contracts for the

services of one or more workers and includes a contractor or subcontractor who performs work or supplies services and a contractor or subcontractor who undertakes with an owner, constructor, contractor or subcontractor to perform work or supply services.

Supervisor: As defined in the Occupational Health and Safety Act:
Person in charge of a workplace or authority over a worker.

Procedure: Procedure for the Handling of Fuel on Construction Sites All other terms as defined in the LFHC, Section 1.4.

4.0 RESPONSIBILITIES

- 4.1 It is the primary responsibility of the Supervisor(s) to see to it that all fuel handling and dispensing is done in a safe and proper manner in accordance with this procedure.

5.0 ENVIRONMENTAL CONCERNS

- 5.1 The accidental release of fuel while handling or dispensing may adversely affect the environment.

6.0 ENVIRONMENTAL PROTECTION PROCEDURES

The following protection procedures are intended to prevent a loss or escape of product and, in the event of a spill, to minimize the impact of such spill of fuel on the environment.

- 6.1 Delivery of Fuel to the site:
 - 6.1.1 Delivery of fuel to the site will be by approved highway tanker mobile refueling tank.
 - 6.1.2 Such delivery may be into on-site mobile refueling tanks or directly into the equipment.
 - 6.1.3 Transfer of fuel from the supplying highway tank to an on-site highway tank will only be allowable if the on-site highway tank meets the requirements of the B620 standard and the refilling of the on-site highway tank is done in accordance with section 9.4 of the LFHC, which governs loading and unloading of highway tanks and requires the use of a down spout to the bottom of the compartment for open dome loading, as well as bonding of the highway tank.
 - 6.1.4 Highway tanks shall be operated by a competent person.
- 6.2 **Dispensing of Fuel:**
 - 6.2.1 All dispensing or transfer of fuel will be attended for the duration of the operation. The attendant will be aware of proper fuel handling procedures to minimize the risk of a spill and shall continuously scan the area adjacent to the fueling operation for possible leaks or spills.
 - 6.2.2 Transfer and dispensing of fuel will be done utilizing pumping equipment, an approved hose and top-fill nozzle.
 - 6.2.3 When fueling under the conditions of Section 6.1.7.1 of the LFHC, absorbent pads are to be placed around the fuel inlet prior to

- dispensing.
- 6.2.4 Ensure that a site-appropriate spill containment kit is readily available.
 - 6.2.5 Unreeling of fuel transfer hose and nozzle shall be done with the nozzle in the upright position. The nozzle shall be kept clear of the ground when returned to the reel or storage position.
 - 6.2.6 Verify that the proper connection of the fuel fill hose to the fill pipe of the highway tank, mobile refueling tank or the equipment being filled and verify that the fill valve is open.
 - 6.2.7 Transfer of fuel is to be stopped prior to overflowing, leaving room for expansion. Mobile refueling tanks and fuel tanks on vehicles and equipment are not to be overfilled.
 - 6.2.8 Operation of moving equipment in the immediate area of a fueling operation shall be suspended.
 - 6.2.9 Welding and/or burning operations within 3 meters will be stopped while fueling is in progress.
 - 6.2.10 Maintain regular inspections of fuel systems and their components for leakage, deterioration or damage, in accordance with construction regulations.

6.3 Additional Dispensing Requirements for Marine Operations:

(Note –mobile fueling of watercraft is prohibited at Provincial marinas.)

- 6.3.1 Secure barge, marine vessel or service barge, on which the equipment to be fueled is mounted, to the work platform or wharf with proper marine lines.
- 6.3.2 Prior to fuel transfer from mobile refueling tanker barge, to marine vessel or to barge mounted equipment, establish direct communication between the highway tank operator or mobile fueling attendant and the marine operator. This shall be maintained until fueling is completed.
- 6.3.3 Where it is necessary to transfer a mobile fueling tank from the wharf or work platform to a barge, or from one barge to another, the tank shall be engineered for lifting and equipped with proper lifting points and lifting tackle and the transfer shall be affected utilizing hoisting equipment in accordance with normal safety procedures.
- 6.3.4 During marine fueling operations, the attendant shall be particularly vigilant in scanning the water area adjacent to the fueling operation for possible leaks or spills.

6.4 Spills:

Preventative measures are the best means of avoiding accidental release of petroleum products, hence protecting our environment. However, in the event of an accidental release, the following will occur:

- 6.4.1 The Constructor will have appropriate spill response equipment available for all phases of the project area – see Appendix "A", listing such equipment.
- 6.4.2 Cleanup action will follow the Spill Contingency Plan – see Appendix "B" for sample Spill Contingency Plan.
- 6.4.3 All spills or suspected spills of petroleum products, on land or into the water, regardless of size, will be reported immediately to the Supervisor. The Supervisor will report the spill immediately to the Project Manager, or his delegate, who shall ensure notification of the appropriate Authorities.

6.5 **Posting of Procedure:**

- 6.5.1 This Procedure shall be posted or available on site and a copy shall be incorporated in the company safety policies and procedures. Ensure all records of employee training are kept.

7.0 PROCEDURE FOR THE STORAGE OF FUEL ON CONSTRUCTION SITES

7.1 Storage of Fuel:

- 7.1.1 Where the circumstances require, fuel may be stored in an approved mobile refueling tank. (Tanks listed to both CGSB 143.146 and ULC-S601 are suitable for both transportation and aboveground storage.)
- 7.1.2 Storage of mobile fueling tanks when not in use shall be within an area where there is no exposure to damage by vehicular movement.
- 7.1.3 The fuel storage area will be located away from drainage channels.
- 7.1.4 Where a mobile refueling tank is in use and there is a danger of spillage contaminating a stream, waterway or sewer, it shall be at a location which complies with the diking requirements of Section 3.3.1 of the LFHC, unless double wall tanks are used. Refer to Appendix C re diking requirements.
- 7.1.5 All highway tanks and mobile refueling tanks are to be properly labeled in accordance with the Transportation of Dangerous Goods regulations.
- 7.1.6 Approved fire extinguishers (Minimum rating of 40-BC) will be located near the fuel storage areas.
- 7.1.7 Smoking will not be permitted in the fuel storage facility and "No Smoking" signs will be posted. No smoking will be permitted during any fueling operations. "No Smoking" signs are to be maintained in good condition.
- 7.1.8 Waste oils, lubricants, greasy and oily rags or other materials subject to spontaneous combustion will be retained in a labeled container used for that purpose exclusively and will be properly disposed of at frequent intervals.
- 7.1.9 Appropriate emergency spill equipment will be available in the fuel storage area – see Appendix "A" listing such equipment.
- 7.1.10 No "hot work" shall take place within 3 meters of a storage zone.
- 7.1.11 In cases where fuel is being stored on site, this Procedure shall be posted or available on site and a copy shall be incorporated in the company safety policies and procedures. Ensure all records of employee training are kept.

APPENDIX "A" TO
PROCEDURE FOR THE HANDLING OF FUEL ON CONSTRUCTION SITES

SPILL RESPONSE EQUIPMENT TO BE AVAILABLE ON SITE:

For sites where fuel is stored and dispensed the following supplies shall be kept available to respond to and contain a diesel fuel spill:

A commercially available kit recommended for 40 gal. spill:

Typical contents:

3" dia. x 48" oil socks – 10 No.

3" dia. x 10' oil socks - 3 No.

17"x 19" oil pads – 40 No.

18" x 18" x 2" pillows – 8 No.

Disposable material containment Bags – 10 No.

Latex gloves – 2 pair

Granular absorbent – 4 gal.

Polyethylene salvage drum container –1 @ 55-gallon capacity

For sites where fuel is dispensed only, i.e., no storage facility:

A commercially available kit recommended for 10 gal. spill:

Typical contents:

3" dia. x 48" oil socks – 4 No.

17" x 19" oil pads – 25 No.

Disposable material containment Bags – 2 No.

Latex gloves – 1pair

Granular absorbent –1 gal.

PVC Bag container - 1 No.

Where the site is within 30m of a waterway, the kit shall include absorbent boom supplies.

APPENDIX "B" TO
PROCEDURE FOR THE HANDLING OF FUEL ON CONSTRUCTION SITES

SPILL CONTINGENCY PLAN:

All spills or suspected spills of petroleum products, on land or into the water, regardless of size, will be reported immediately to the Supervisor. The Supervisor will report the spill immediately to the Project Manager, or his delegate, who shall ensure notification of the appropriate Authorities, the Spill Action Centre of the Ministry of the Environment and Climate Change, phone 1-800-268-6060, unless the spill is classed as non-reportable, according to the criteria below:

1. Non-Reportable Spills

Class VIII Spill: The spill of gasoline or an associated product of not more than 100 liters in areas restricted to the public, or not more than 25 liters in areas with public access, at a location defined as a bulk plant, marina, private outlet or retail outlet need not be reported to the Ministry or to the municipality if the following conditions are met:

The four conditions that must be met for the reporting exemption to apply are:

1. the spill of the gasoline or an associated product does not enter and is not likely to enter directly or indirectly water or a watercourse, as defined by the Ontario Water Resources Act,
2. the spill does not cause adverse effects other than those that are readily remediated through cleanup and restoration of paved, graveled or sodded surfaces,
3. arrangements for remediation are made immediately, and
4. records of the spill are maintained.

2. Other Spills:

Any spill exceeding 100 liters or which does not meet the conditions for exemption from reporting requirements.

Such spills must be reported to the Supervisor, Project Manager and the Authorities. The report shall include details of the type of material spilled, the source of the spill and whether the spill has reached the environment (e.g. drains, sumps or waterways).

The supervisor on site or other designated person shall take charge of spill containment and cleanup. Workers shall be assigned to assist with control and remedial measures:

- Stop the leak
- Block off any drains or access to drainage
- If spill has entered or is in danger of entering a waterway, boom-off area to contain spill
- Assess the level of the spill and report as necessary
- Assess the method of cleanup
- In an environmentally sensitive area, get advice from MOECC as to clean-up measures
- Proceed with recovery of spilled fuel and clean-up
- Arrange appropriate disposal of fuel recovered and debris (in landfill site)
- If a government authority sends a representative to monitor the clean-up and ensure that it is done adequately, cooperate fully with such representative
- Maintain a record of the spill and cleanup

Details of records are to be prepared and kept for two years and must include: date, time, location and duration of the release; identity and quantity of the pollutant; circumstances of the spill;

containment and clean-up efforts utilized; disposal and re-use method used and specifics of any adverse effect observed.

APPENDIX "C" TO
PROCEDURE FOR THE HANDLING OF FUEL ON CONSTRUCTION SITES DIKING

REQUIREMENTS FOR SECONDARY CONTAINMENT:

Where a mobile refueling tank is in use and there is a danger of spillage contaminating a stream, waterway or sewer, the following secondary containment requirements apply:

1. Double-walled tanks under 80,000 L - considered as equivalent to diking requirements, requiring no further secondary containment measures.
2. The floor and walls of every dike shall be constructed to be compatible with the liquid being stored, shall be leak tight and shall be made of a material with a maximum permeability of 1×10^{-6} centimeters per second for a minimum period of 72 hours and to withstand the full hydrostatic head of product.
3. For field-erected tanks where the dike floor and walls conform to the requirements in clause 2 up to the perimeter of the tanks, monitored double bottoms shall be used.
4. The walls of the diked area shall be designed and constructed so that they do not exceed an average height of 1.8 m above the ground level within the enclosed dike.
5. The distance between the dike wall and an aboveground storage tank shell shall be not less than 1.5 m.
6. Where a dike is provided with valves which allow the removal of accumulated surface water or product, they shall be closed and locked when not engaged in a supervised draining operation and the valve positions shall be clearly marked whether opened or closed.
7. An opening in the dike bottom or sidewalls for drainage purposes is not permitted.
8. Dikes shall be regularly inspected and maintained.