

**PROCEDURE
FOR THE
HANDLING OF FUEL
ON
CONSTRUCTION SITES**

Civil Engineering Sector
Labour-Management
Health and Safety Committee



September 2001

PROCEDURE FOR THE HANDLING OF FUEL ON CONSTRUCTION SITES

1.0 PURPOSE

- 1.1 To perform safe handling of fuel to vehicles, equipment and vessels, guarding against spills and safeguarding the environment from the hazards associated with accidental spills.

2.0 REFERENCES

- 2.1 Section 5.7 of the Liquid fuels Handling Code headed:

5.7 Mobile Fuelling Facilities

- 2.3. Section 5.7.2 of the Liquid fuels Handling Code, which states:

5.7.2 Dispensing shall not take place within

- a) 30 metres of a stream, river, lake, canal or natural watercourse;
- b) a building;
- c) 3 metres of a property line;
- d) 3 metres of a highway except when requested to do so by an emergency service provider;
- e) 4.5 metres of any opening in a building;
- f) 3 metres from a building with no openings, or;
- g) 7.5 metres from any source of ignition.

- 2.3. Section 5.7.3 of the Liquid fuels Handling Code, which states:

The requirements of 5.7.2 (a), (c), (d), (e) and (f) may be modified where the mobile refueller has an approved procedure that will prevent a loss or escape of product from

- a) creating a hazard to public health or safety
- b) contaminating any fresh water source or waterway
- c) interfering with the rights of any person, or
- d) entering into a sewer system or 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: Person in charge of the Employer's employees.

Procedure: Procedure for the Handling of Fuel on Construction Sites

All other terms as defined in the Liquid fuels Handling Code, Section 1.2.

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 tank vehicles or mobile refuelling tanks

6.1.2 Such delivery may be into on-site mobile refuelling tanks or directly into the equipment.

6.1.3 Transfer of fuel from the supplying tank vehicle to an on-site tank vehicle will only be allowable if the on-site tank vehicle meets the requirements of the B620 standard and the refilling of the on-site tank vehicle is done in accordance with section 8.8 of the Liquid fuels Handling Code, which governs loading and unloading of tank vehicles and requires the use of a down spout to the bottom of the compartment for open dome loading, as well as grounding of the tank vehicle.

6.1.4 Tank vehicles 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 fuelling 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 fuelling under the conditions of Section 5.7.2 (a), (c), (d), (e) or (f) of the Liquid fuels Handling Code, absorbent pads are to be placed around the fuel inlet prior to dispensing, as per Section 5.7.3.

- 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 tank vehicle, 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 refuelling 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 metres will be stopped while fuelling 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 Requirements for Marine Operations:

- 6.3.1 Secure barge on which equipment is mounted, marine vessel or service barge to the work platform or wharf with proper marine lines.
- 6.3.2 Prior to fuel transfer to mobile refuelling tank on barge, to marine vessel or to barge mounted equipment, establish direct communication between the tank vehicle 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 effected 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 fuelling 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.

PROCEDURE FOR THE STORAGE OF FUEL ON CONSTRUCTION SITES

7.0 Storage of Fuel:

- 7.0.1 Where the circumstances require, fuel may be stored in an approved mobile refuelling tank.
- 7.0.2 Storage of mobile fueling tanks when not in use shall be within an area where there is no exposure to damage by vehicular movement.
- 7.0.3 The fuel storage area will be located away from drainage channels.
- 7.0.4 Where a mobile refuelling 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 Liquid fuels Handling Code, unless double wall tanks are used. Refer to Appendix C re diking requirements.
- 7.0.5 All tank vehicles and mobile refuelling tanks are to be properly labelled in accordance with the Transportation of Dangerous Goods regulations.
- 7.0.6 Approved fire extinguishers (Minimum rating of 4A, 60-B, or C) will be located near the fuel storage areas.
- 7.0.7 Smoking will not be permitted in the area of 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.
- 7.0.8 Waste oils, lubricants, greasy and oily rags or other materials subject to spontaneous combustion will be retained in a labelled container used for that purpose exclusively and will be properly disposed of at frequent intervals.
- 7.0.9 Appropriate emergency spill equipment will be available in the fuel storage area – see Appendix “A” listing such equipment.
- 7.0.10 No “hot work” shall take place within 3 metres of a storage zone.
- 7.0.11 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.

**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 gal 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 – 1 pair

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 Hotline of the Ministry of the Environment, 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: a spill of a fluid petroleum product at a location defined in the Liquid fuels Handling Act as a bulk plant, marina, private outlet or retail outlet, of not more than 100 litres in areas restricted from public access.

Conditions required for a Class VIII spill to be exempt from reporting requirements:

- (a) the spill does not enter and is not likely to enter any waters, as defined in the Ontario Water Resources Act, directly or through drainage structures;
- (b) the spill does not cause and is not likely to cause any adverse effects, other than those that are readily remediated through cleanup and restoration of paved, gravelled or sodded surfaces; and
- (c) arrangements for the remediation referred to in (b) above are made and carried out immediately
- (d) records of the spill are maintained..

2. Other Spills: Any spill exceeding 100 litres or which does not meet the conditions for exemption from reporting requirements of the Environmental Protection Act.

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 MOE 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

To facilitate quick response there shall be a record readily available of the spill response equipment on site and its location. The records shall include contact information for sources of spill control, containment and cleanup supplies to augment those on site, if required and names of spill cleanup contractors in the area.

**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 65,000 - considered as equivalent to diking requirements, requiring no further secondary containment measures.
2. Floor and walls of dike to be constructed and maintained leak tight and of a material with a maximum permeability of 1×10^{-6} centimetres per second for a minimum period of 72 hours and to withstand the full hydrostatic head of product.
3. The walls of the diked area shall be designed and constructed so that they do not exceed an average height of 1.8 metres above the ground level within the enclosed dike.
4. 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.
5. An opening in the dike bottom or sidewalls for drainage purposes is not permitted.
6. Dikes shall be regularly inspected and maintained.