

# TSSA

## Fuels Safety: Overview

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Putting Public Safety First



# Topics

- About TSSA
- TSSA Advisory FS-227-17
- Who to Call
- Guidelines for Reporting
- Carbon CO Monoxide Poisoning
- Pipeline strikes
- Explosions
- Liquid fuel leaks and spills
- Oil Storage Tanks
- Appliance fires
- Multiple Fuel Sources

# About TSSA

- Created in 1997 to deliver safety services on behalf of the Government of Ontario
  - amusement devices, boilers and pressure vessels, elevating devices, fuels, operating engineers, and ski lifts.
- Not-for-Profit, self-funded organization, no government funding
  - **fixed annual fees charged on a cost-recovery basis providing public safety services**
- Administers and enforces public safety laws under Ontario's *Technical Standards and Safety Act, 2000*

# TSSA Fuels Safety Program

- **Inspections & Investigations** of incidents ( fire ,explosions , vapour release, CO exposure, etc.) and the storage and handling of fuels.
- **Engineering Services**, variance and approvals of unapproved equipment, special effects, and high-pressure piping.
- **Licensing** of fuel facilities and pipeline.
- **Registration of** contractors and **certification of** tradespersons who install and service fuel equipment.
- **Education and Awareness programs** –safety presentations, campaigns - Carbon Monoxide (CO) safety

# Fuels Safety Program

- The Fuels Safety program regulates the transmission, distribution and transportation, storage and dispensing, and utilization of fuels.
- 71,900 + certified fuels professionals
- 7,900 + licensed facilities

# TSSA Fuels Safety Information

Technical Standards & Safety Act, S.O. 2000, Chapter 16.

*Ontario Regulation 210/01 – Oil & Pipeline Systems*

*Ontario Regulation 211/01 - Propane Storage and Handling*

*Ontario Regulation 197/14 Liability Insurance Requirements for Propane Operators*

*Ontario Regulation 212/01 - Gaseous Fuels*

*Ontario Regulation 213/01 – Fuel Oil*

*Ontario Regulation 214/01 – Compressed Natural Gas*

*Ontario Regulation 215/01 - Fuels Industry Certificates*

*Ontario Regulation 216/01 – Certification of Petroleum Mechanics*

*Ontario Regulation 217/01 – Liquid Fuels*

TSSA Code Adoption Document Amendments/CSA Codes/Director's Orders/Safety Advisories

Certification Standards (Built, Designed and Tested to)

Manufacturer's Certified Installation Instructions for Appliances & Equipment

# Technical Standards and Safety Authority

## Incident Reporting: Hydrocarbon Fuels Industry

### Report an Incident:

<https://www.tssa.org/en/about-tssa/report-an-incident>

- **Guidelines for a reportable incident in the Fuels industry, view the [Hydrocarbon fuel criteria for reporting an incident](#).**



#### TECHNICAL STANDARDS AND SAFETY ACT

Fuels Safety Division	Ref. No.: FS-227-17
ADVISORY	Date: June 4, 2021

**Subject:** Incident Report Criteria for Hydrocarbon Fuels Industry  
**Distribution:** Posted on TSSA website and sent to TSSA Fuels Advisory Councils, Fuels Engineers and Inspectors, OPCA, CPA, MGCS, MPHCA, OFM, One Call, CIPMA, NOTO, Boating Ontario, COHA

#### Introduction

Every year, many incidents involving hydrocarbons fit into the reporting requirements provided in the Ontario regulations. Reporting every situation to TSSA would however, provide little value to the public safety. There is confusion surrounding how to "notify forthwith an inspector" as required by the regulations. In order to assist our clients with these issues, TSSA has clarified the circumstances and procedures for reporting below.

Ontario regulations require that where it appears that:

- Carbon Monoxide poisoning
- Asphyxiation
- Explosion or fire, or
- An accidental release, vent, leak or spill

has occurred because of the use, handling or storage of hydrocarbons covered under the *Technical Standards and Safety Act*, the certificate/ROT/license holder, operator, contractor or distributor shall notify forthwith an inspector of the occurrence by telephone, facsimile or any other form of electronic transmission and a registration / license holder shall have in place procedures for such a notification.

The regulations further require that no person shall interfere with or disturb any wreckage, article or thing at the scene of an occurrence that is connected with it (except in the interest of public safety) until such time as an inspector has given permission to do so.

#### Who to Call?

TSSA has an agreement in place with the Ministry of Environment and Climate Change - Spills Action Center (SAC) to receive notifications under the Act. All reporting of incidents involving hydrocarbon fuels or their utilization equipment is done through the SAC. They can be reached at 1-800-268-6060 or 1-416-325-3000, 24 hours a day, seven days a week. Reporting an incident to SAC meets the regulatory requirement of reporting incidents to TSSA. If there is an immediate need to disturb any article at the site and you wish to speak to a TSSA representative, you must inform the Spills Action Center operator that you want the TSSA Fuels Safety Program on-call person to contact you.

#### Carbon (CO) Monoxide Poisoning

# Incident Reporting Criteria: Hydrocarbon Fuels Industry

## Who to Call?

- TSSA has an agreement in place with the Ministry of Environment and Climate Change - Spills Action Center (SAC) to receive notifications under the Act.
- All reporting of incidents involving hydrocarbon fuels or their utilization equipment is done through the SAC.
- If there is an immediate need to disturb any article at the site and you wish to speak to a TSSA representative, you must inform the SAC operator that you want the TSSA Fuels Safety Program on-call person to contact you.

**Spills Action Center – 1-800-268-6060**

**24 hours a Day, 365 Days/Year**



# Incident Reporting Criteria: CO

## Carbon (CO) Monoxide Poisoning

Criteria as to when TSSA must be notified when attending a scene where CO exposure has been reported:

- determined that work was performed on the equipment in the past six months by a technician, the incident must be reported to the Fuels Safety Program.
- equipment failure resulting in CO production occurs in a rental occupancy where someone other than the occupant has responsibility for the maintenance of the equipment, the incident must be reported to the Fuels Safety Program.
- 'abnormal condition' which may represent a product defect or installation related error is found during an investigation of possible CO exposure, the condition must be reported to the Fuels Safety Program.
- CO-related injury requiring medical attention has occurred as a result of problems with the equipment, the incident must be reported to the Fuels Safety Program.



# Incident Reporting Criteria: CO

## Evacuation of a Building Due to CO Release

Report of a CO detector alarm is not a sufficient reason to report a CO incident; reporting only required where a hydrocarbon fuel appliance may have been involved (not solid fuel appliances, automobiles etc.).

**Note:** First responders will often send people to the hospital as a precaution. For an incident to be reportable, first confirm with the responder that there are symptoms of CO exposure.

Workers are cautioned that exposure to CO may be harmful and consideration should be given to the wearing of self-contained breathing apparatus or supplied air-breathing systems.

- a. Remove all occupants from the building.
- b. Close all ventilation openings, doors and windows and any interior doors between the space in which the appliance is located and other parts of the building.
- c. Turn on all fuel fired appliances and check for spillage at the draft hood relief openings. Any spillage after the appliance has achieved steady state operation must be investigated for source. To check for building depressurization, repeat steps A and B above and
- d. Turn on all exhaust fans, range hoods, clothes dryers etc. If a solid fueled appliance was in operation at the time of the incident, operate it again. Operate all fuel fired appliances and test for spillage and CO.



## Incident Reporting Criteria: Pipeline Strikes

- Pipeline strikes shall be reported immediately through SAC where the strike has caused evacuation, injuries, or media attention.
- All other pipeline strikes must be reported to TSSA within two weeks of the occurrence, following a protocol acceptable to TSSA



## Incident Reporting Criteria: Explosions

### Explosions

- Explosions must be reported where they have caused injury, damage to the equipment or a fire.
- Minor 'delayed ignitions' would not normally be considered to be reportable





## Incident Reporting Criteria: Liquid Petroleum Spills

- Liquid Petroleum Spills are product escapes that result from operating errors.
- Any spill of a petroleum product in excess of:
  - 100 litres at sites restricted from public access (i.e. bulk facility, private fuel outlet, private residence etc.).
  - 25 litres at sites with public access (i.e. retail service station, marina etc.) must be immediately reported to the SAC.
- Spills of lesser quantities need not be reported to TSSA fuels safety, unless the spill would:
  - Create a hazard to public health or safety.
  - Contaminate any fresh water source or waterway.
  - Interfere with the rights of any person, or
  - Allow entry of product into a sewer system or underground stream or drainage system.
- **Leaks**  
Leaks are product escapes that result from equipment failures. All confirmed leaks, regardless of quantity released, must be immediately reported to the SAC.



## Incident Reporting Criteria: Propane and Natural Gas

Propane and Natural Gas Accidental releases that have resulted in the following shall be reported immediately through SAC:

- Any unplanned ignition of propane including fire or explosion.
- Any time an operator requests the assistance of emergency services, whether internal (in house emergency teams) or external (fire, police, ERAP etc.).
- Any release resulting in media attention.
- Any injury to a person requiring medical treatment as a direct result of the release; or
- All other accidental releases, abnormal venting and spills shall be reported to the Spills Action Centre within two weeks of the occurrence.



## Incident Reporting Criteria: Petroleum Product

### **Discovery of a Petroleum Product that has escaped to the Environment or Inside a Building**

- The discovery of a petroleum product that has escaped to the environment or inside a building must be reported as noted in *TSSA's Environmental Management Protocol for Operating Fuel Handling Sites (EMP) in Ontario*.

A copy of the EMP is available on TSSA's website, [www.tssa.org](http://www.tssa.org).

# Non-Compliant Conditions

## Fuel oil storage tank

- Non Compliant installation

- Improper Tank Support
- Tank Saddles & wood supports not using manufacture's recommended steel pipe legs supports





# Oil Leak

- Leaks are product escapes that result from equipment failures.
- All confirmed leaks, regardless of quantity released, must be immediately reported to the SAC.



# Furnace

Incident Requires Reporting to SAC

- Signs of Fire in Furnace Blower Cabinet
- Behind Blower door Fan control board catches fire burns wiring.



# Fire

**Accidental releases that have resulted in the following shall be reported immediately through SAC:**

## **Fire**

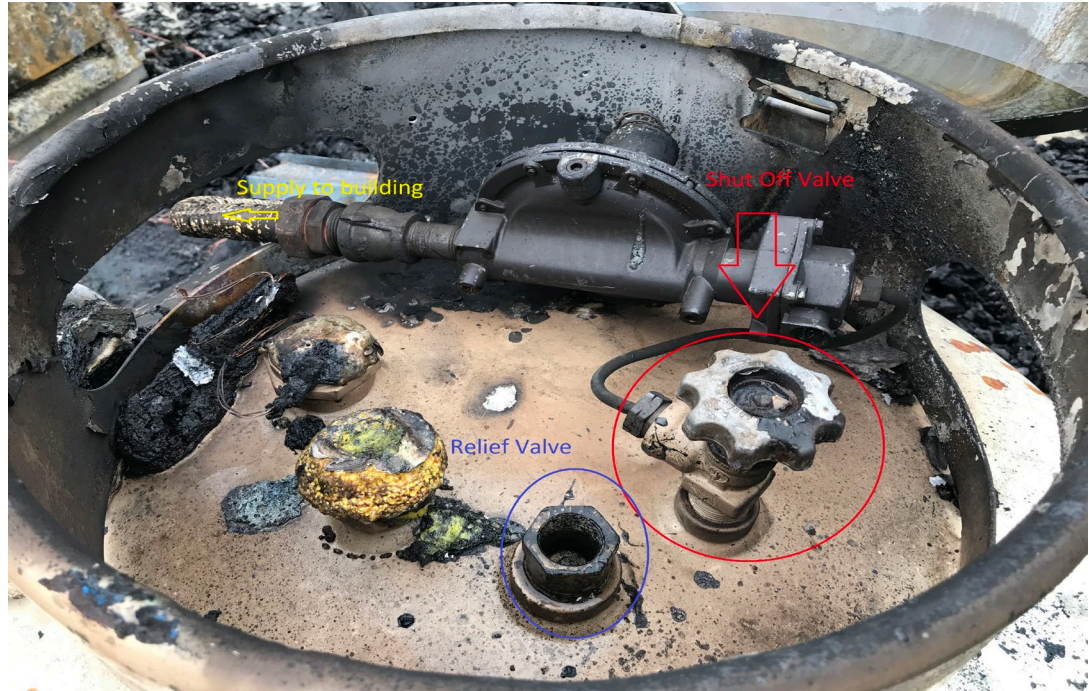
A homeowner using a grinder to remove the brass valve of a 100 pound propane cylinder while gathering brass scrap for money.





# Propane Tank

- Typical connections on top of the propane container
- Propane tank may relieve in the event of an overpressure condition, caused by heat.
- Responders need to be aware of the propane tanks relieving and the potential for a BLEVE (Boiling Liquid Expanding Vapour Explosion) to occur.



# Multiple Fuel Sources

First responders need be aware of the potential to have multiple fuel sources at one location.

Expansion of natural gas distribution pipelines means rural communities getting natural gas for the first time. Potential for locations to have multiple fuel sources installed.

Often times propane tanks are hidden behind a fence or in a tree line away from the building.



# QUESTIONS?



## **Future Discussion or training awareness opportunities:**

- Mobile Foods
- Construction Site inspections
- Propane Storage and Handling

Suggestions?