



# TSSA: Enhancing Public Safety In Ontario



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## Ontario Petroleum Contractors Association AGM Toronto, March 11, 2015

Ann-Marie Barker, P. Eng.  
Engineer Specialist, Fuels Safety

Zenon Fraczkowski, P. Eng.  
Fuels Safety Engineering Manager



# Agenda

- Corporate and Organization Update
- Revision of the LFHC
- Discussion

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- 6 Major Involvement Areas
  - Amusement Devices
  - Boilers and Pressure Vessels
  - Elevators, Escalators and Ski Lifts
  - Fuels
  - Operating Engineers
  - Upholstered and Stuffed Articles

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# TSSA Services

## Multiple major tasks, responsibilities and stakeholders:

- Public Education
- Training and Certification
- Licensing and Registration
- Engineering Design Review
- Investigation/ Prosecution
- Inspections
- Consultations
- MGCS
- OPCA, HRAI, CPA, CBS, COHA, CGA
- CSA, ULC, WH
- Certificate holders
- Contractors
- Manufacturers
- IGAC, NPSAC

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# Fuels Safety Program Scope

- FY 2013/14:
  - 56 000 certificate holders
  - 9 000 registered contractors
  - 9 000 licensed sites
  - 6 000 inspections
  - 38 000 inspection orders
  - 500 field approvals and design reviews
  - 900 variance approvals
  - 450 environmental reviews
  - Advocacy – 150+ safety presentations every year

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# Fuels Safety Program Organisation

- Inspection
  - 4 regions
    - Eastern and Northern - Mike Goldberg
    - Golden Horseshoe – Sat Viridi
    - Central – Mark Schubert
    - Western – Mike Davis

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# Fuels Safety Program Organisation

## ● Engineering

- Natural Gas – Marek Kulik
- Propane – Solomon Ko
- Field approvals – Fedja Drndarevic
- Pipelines – Oscar Alonso
- Fuel Oil – Raphael Sumabat
- Digester and Landfill – Marvin Evans
- Gasoline – Ann-Marie Barker
- Variances – Richard Huggins
- Vehicle Fuels – Brigit Gillis
- Mobile Food Carts – Ted Clark

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# TSSA Website

The screenshot shows the TSSA website interface. At the top left is the TSSA logo (Technical Standards & Safety Authority). The main header reads "Technical Standards & Safety Authority" with a "Home : Contact Us" link. A dropdown menu for "Select an Inspection Directory" is visible. Below the header is a navigation bar with categories: Amusement Devices, Boilers & Pressure Vessels, Elevating Devices, Fuels (highlighted), Operating Engineers, Ski Lifts, Upholstered & Stuffed Articles, and Corporate. The main content area is divided into a left sidebar with categories like "Regulated Safety Services", "Public Safety & Consumer Information", and "Specialized Safety Services". The central content area features a "Safety Services" section with a list of links such as "Overview", "Safety Legislation & Regulation Information", "Fuels for Heating", "Fuels for Transportation", "Field Approvals", "Fuels-Related Technician Certification", "Environmental Inquiries", "Quality Assessed Programs", "Client Newsletters", "Product Recalls", "Products for Sale / Download", "Forms & Fees", "Reporting an Incident", "Document Search", "Release of Records", "FAQs", "Advisory Councils", "Appeals", "Related Links", and "Contact Us". On the right side, there are three promotional boxes: "Report an Incident", "has your contact information changed? MAKE UPDATES HERE", and "Safety News" with links for "Get TSSA Updates RSS Feeds/Email" and "Sign In | Subscribe". Below these is a "Latest News" section with a link for "New Application Forms more >>". At the bottom of the browser window, the address bar shows "regulated/fuels/fuelsSale.asp", and the status bar indicates "Trusted sites" and "100%".

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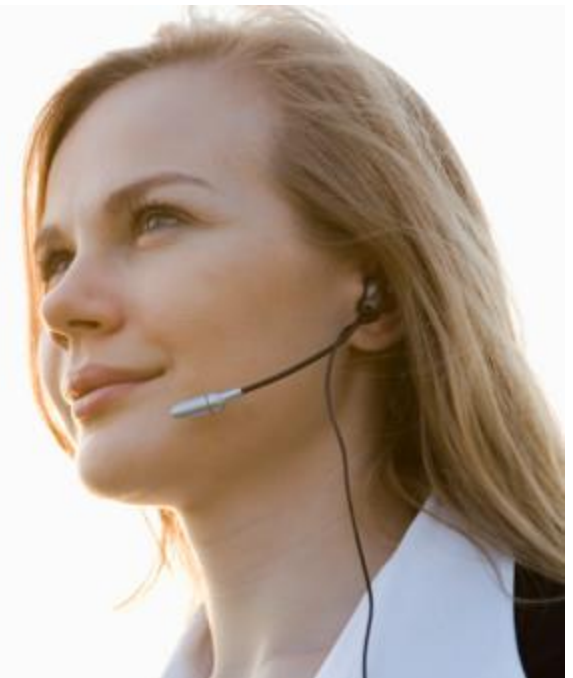




# TSSA Fuels Safety Program

## Queries?

- Contact TSSA's Customer Contact Centre toll-free **1-877-682-TSSA (8772)**
- Visit [www.tssa.org](http://www.tssa.org)



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# Incidents

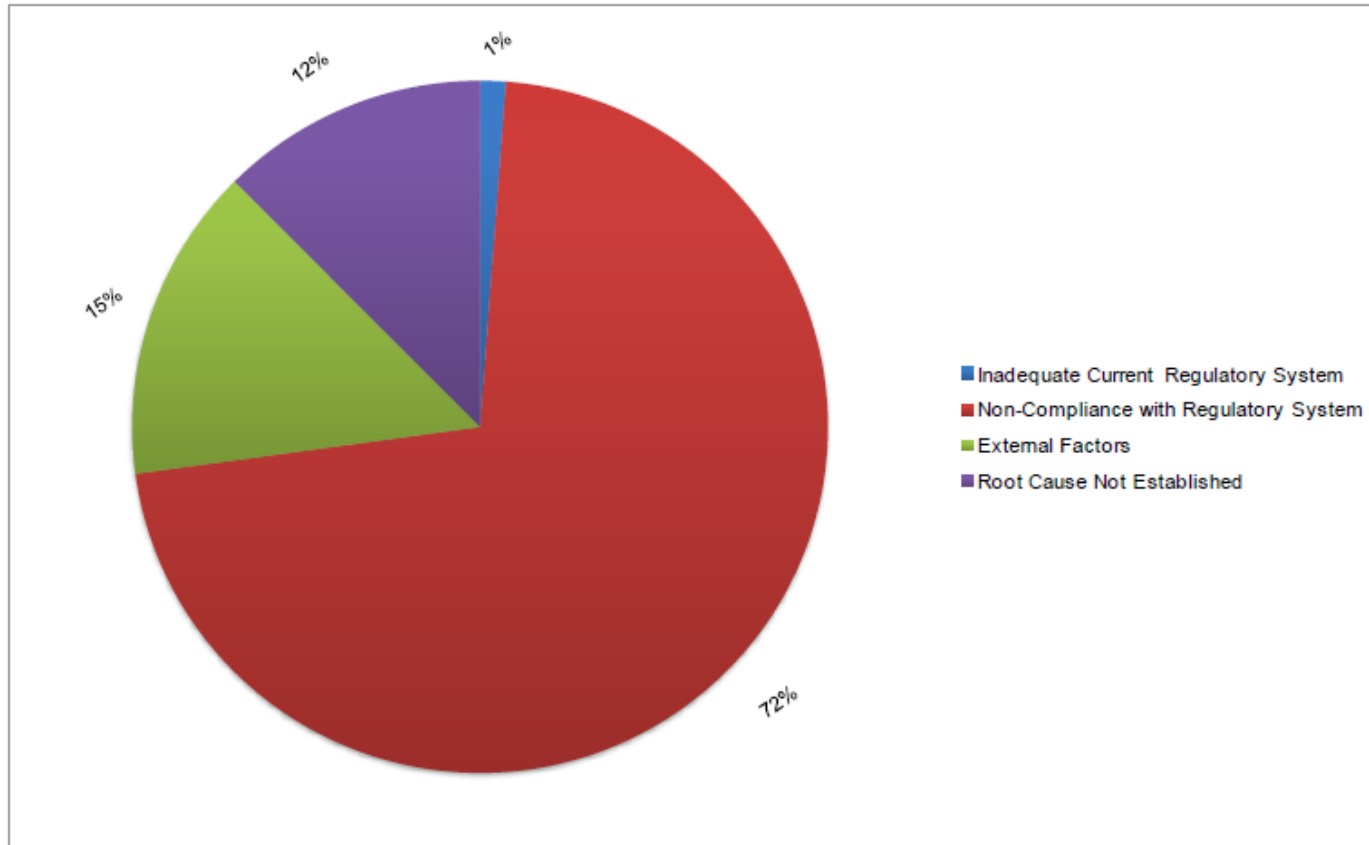
- Carbon monoxide incidents in private dwellings is the leading cause of incidents in Fuels.
- TSSA has no authority to enter and inspect private dwellings.

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# Annual State of Safety Report 2013/14

**Figure FS-4: Risk of Injury or Fatality in fuels by cause  
(based on period ending 2013/2014).**



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# Liquid Fuels – State of Compliance

- Liquid fuels and propane compliance assessed through periodic inspections
- Natural gas compliance assessed through contractor audits

Compliance Rate	Trends at the End of Fiscal Year 2012/2013	Trends at the End of Fiscal Year 2013/2014	Results at the End of Fiscal Year 2013/2014 [prediction interval]
Liquid Fuels	↓0.61%/quarter	↓0.70%/quarter	33% [15% to 58%]
Propane	↑1.16%/quarter	↑1.34%/quarter	69% [43% to 84%]
Natural Gas	↓0.51%/quarter	↓0.27%/quarter	56% [52% to 68%]

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# Progress

- MCCR
- TSSA 1997
- Sunrise 2008
- MGCS oversight and regulatory primacy
- Compliance initiatives 2014

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# Partnership

- Fees frozen till April 30, 2017
- Public consultations on LFHC
- Roundtable on propane regulation
- Industry meetings, workshops
- TSSA Website and EBR postings of CAD revisions and proposals
- Rationales and impacts

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# Code Adoption Schedule

- Adoption of 2015 B149, B139, Z662
  - Expected publication date – Mid 2015
  - January 1, 2016 adoption by TSSA
  - RRG discussion and review ongoing
    - Consultations and Rollout
    - Training
      - Mail vs. electronic notifications
      - In person vs. online training
      - Mandatory vs. optional

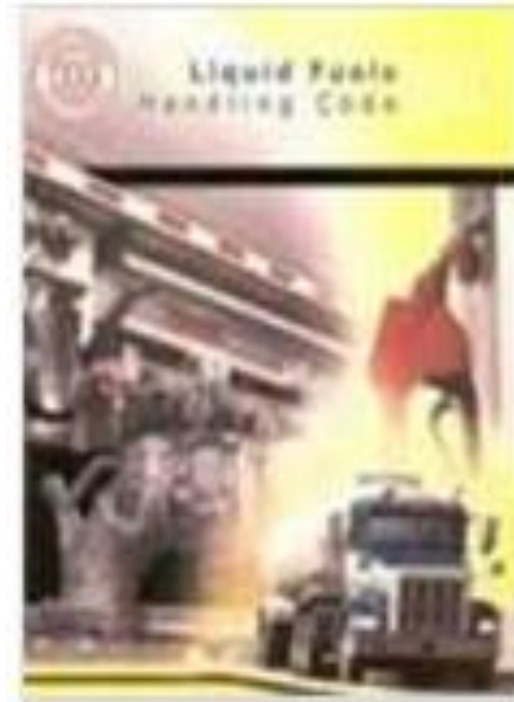
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# Liquid Fuels Handling Code Revision

- The LFHC is currently being revised
- Unlike the other codes, the Liquid Fuels Handling Code, 2007 is not a national standard. It is developed by TSSA in consultation with industry (RRG).
- Public Consultations in Ottawa, London, Sudbury, Sault Ste. Marie and Toronto.



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# Liquid Fuels Handling Code Revision

- Industry representatives include equipment manufacturers, contractors/installers, engineers, owners
  - OPCA
  - OFM
  - ULC
  - CFA
  - CIPMA
  - OPW



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# Liquid Fuels Handling Code Revision

- Resolve industry issues in a manner that achieves both equivalent safety and allows industry to operate effectively
- Not a consensus committee
- Next edition will be published in 2016

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# Proposed Changes to the LFHC

- Where an underground single wall steel storage tank leaks, the owner or operator shall immediately remove the product and take the leaking tank out of service. Within 12 months of the discovery of the leak, the owner or operator shall remove from the facility all underground single wall steel storage tank systems
  - Youngest single-wall steel tank is 20+ years
  - Installations of single wall steel USTs have not been permitted since 1993.
  - They will eventually leak due to corrosion
  - 12 months to allow time for remediation, budgeting, etc.
  - 1993 GHC had similar requirement for all pre-1974 tanks that were not protected from corrosion & were upgraded by fibreglass lining or impressed current. Had 180 days to remove tank nest.

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# Proposed Changes to the LFHC

- Where a single wall steel underground tank is out of service for one year or more, the owner of the tank system or the owner of the property on which the tank is located shall remove the tank and piping from the ground.
  - Youngest single-wall steel tank is 20+ years old
  - They will eventually leak due to corrosion
  - if out of use, single-wall steel tanks are removed after 1 year instead of 2
  - TSSA no longer grants variances for single-wall USTs

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# Proposed Changes to the LFHC

- Where a single-wall underground product piping system fails the Cathodic Protection test, the owner or operator shall conduct a leak test on the piping within 30 days and within 12 months of the Cathodic Protection test failure, the owner or operator shall remove from the facility all underground single wall steel piping systems.
  - Single wall steel pipe (galvanized & black steel) is a known source of leaks.
  - New installations of single wall steel pipe have not been permitted since 1993.
  - Cathodic Protection of piping is not completely effective as buried joints are very difficult to protect and it does not mitigate internal corrosion.
  - Galvanized pipe may have been unprotected for a significant amount of time prior to the initial requirement to upgrade with anodes in 2005.
  - 12 months to allow time for remediation, budgeting, etc
  - CP surveys – 3 readings for each tank and pipe run

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# Proposed Changes to the LFHC

- All tanks & tank compartments must be individually vented
  - Existing sites grandfathered
  - Tank product configurations are always changing. May not know that they are manifolded.
  - Some sites are not upsizing the common manifold.
  - For new sites, it's better to vent each tank and compartment individually. This is less expensive than upsizing the common vent.
- For tanks and tank compartments that require vapour recovery systems in accordance with O. Reg. 455/94, the vapour recovery piping shall not be manifolded.
  - To prevent cross contamination

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# Proposed Changes to the LFHC

- All new pressure systems where the entire piping run is underground shall have Electronic Line Leak Detection (ELLD) and existing installations shall be upgraded with ELLD by 2020.
  - Upgrade will be staged
  - New sites, cost is approximately \$6,000 for three STPs.
  - To retrofit a similar site with stand-alone sensors is same.
  - To retrofit a similar site would cost approximately \$20,000 if there is no Veeder Root or Incon console & if sensors are wired back to the console.

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# Proposed Changes to the LFHC

- All submersible pumps, installed below grade, shall be contained in a monitored sump by December 31, 2020.
  - 5 years from date code is published
  - The old culverts don't provide containment
  - Will require re-piping



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# Proposed Changes to the LFHC

- New section on Private Cardlocks (e.g. Municipalities; trucking companies)
- Same requirements as for a retail cardlock except for oil/water separator and under dispenser fire suppression
  - Some private cardlocks pump as much volume as a retail cardlock
  - Exemption for separator & fire suppression since these sites are usually attended
  - Existing sites grandfathered



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# Proposed Changes to the LFHC

- At facilities that have both Class I and II product, the nozzles shall be differentiated by colour and the product type shall be identified on either the nozzle or at the nozzle holster.
  - Need to differentiate product to prevent putting gasoline into diesel engine.
  - The nozzle size only prevents putting diesel into a gasoline engine, not the reverse.

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# Proposed Changes to the LFHC

- After installation or repair, annually and prior to each marine season, the dispensing hose shall be checked for continuity from the nozzle to dispenser with the hose fully extended.
  - Re-located from marina section because it applies to all hoses.
  - Need to make sure the hose reel is empty of hose in case the issue is between the hose reel and dispenser.
  - If not extended, could have a short circuit that shows ‘false’ continuity.
  - Able to see any breaks/cracks in hose if fully extended.

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# Proposed Changes to the LFHC

- Despite 6.1.6.3, the decommissioning or cleaning of a tank at a bulk plant may occur while the engine of the vehicle is running provided appropriate procedures as described in 9.4.12 are in place.
  - Normally can't transfer product into tanker truck when engine is running.
  - Vacuum trucks need to have engine running to clean out a storage tank
  - Procedures include bonding/grounding & overfill protection

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# Proposed Changes to the LFHC

- Where tanks, piping or dispensers of an UST system is being removed, relocated or replaced ... shall submit an assessment report to TSSA that delineates the full extent of any petroleum product that has escaped from the area(s) where the tanks, piping or dispensers were located ...
  - If tank is removed – EA from tank nest;
  - If dispensers being relocated – EA from island and old pipe location
- where piping is being replaced and where there is no excavation and no evidence of contamination, then no environmental assessment is required.
  - E.g. piping was installed in a pipe chase
- Similar for AST systems

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# Proposed Changes to the LFHC

- Update ULC standards and include new standards
  - New ULC S667-11, Metallic Underground Piping
  - ULC S643 has been incorporated into the new S601.
- Editorial changes to clarify the intent of the clauses

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Thank you

Thank you.

Questions?

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