



UPDATE

Fuels Safety Edition

Message from the Director

By John Marshall, BA, CIGC, Director of Fuels Safety Program

I have now been with TSSA for 18 months and further appreciate the strong relationship between the organization, the industry and the public we all essentially serve. In this issue of the *Fuels Update*, there are articles on the dangers of indoor use of portable camp heaters, prosecutions and fines levied on companies that have violated provincial safety laws, recalls of equipment, upgrade training for petroleum mechanics and safe methods to bridge the compliance gap for unapproved commercial and industrial fuels equipment. These articles show the breadth of TSSA's safety mandate, and continue to show how both TSSA and the fuels industry have an impact on everything from people camping in the woods to the goods produced by the manufacturing industry that we use everyday. TSSA, with its industry partners, has a responsibility to balance the practicality of requirements with the associated hazard. This is uniquely calculated through TSSA's risk-informed decision-making – to determine the appropriate mechanism to best ensure safety.

In order to further achieve positive safety outcomes, TSSA uses many effective techniques such as training, consultation, adoption of new standards and codes, and compliance audits. While

fully recognizing we are more effective with industry support, some players will unfortunately need deterrents such as prosecutions and fines to achieve compliance.

Looking forward, in the next 12-18 months, TSSA will be reviewing fuel safety regulations for liquid fuels, pipeline, fuel oil, gaseous fuels, compressed gas and propane. This is our opportunity to draft changes where needed to reflect an industry safe practice or to increase requirements where appropriate. I encourage our industry partners to actively participate in this process through advisory councils and help TSSA and the Ministry of Government and Consumer Services make sure the next set of Ontario fuel safety regulations continue to be practical, address safety gaps and remain vital for public safety in our province.

As TSSA's Fuels Safety Program strives for continual improvement, I welcome your feedback on how effectively TSSA meets its commitments and responsibilities. I look forward to continuing our work together toward a safe, successful year and a mutually-satisfying goal of positive safety outcomes.



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In this ISSUE

Bringing Safety to the Show	2
Existing Unapproved Commercial or Industrial Equipment Trend	2
Seasonal Alert	3
Mandatory Upgrade Training for Equipment Mechanics and Site Operators	4
Take a Tip from Boxall Heating	4
BBQ Propane Cylinder Valves	5
Structural Restoration Pleads Guilty	6
Elgin Construction Fined	6
Due Diligence	7
Recall Alerts	8

Bringing Safety to the show

TSSA'S FUELS SAFETY PROGRAM RECENTLY ATTENDED CANADA'S PREMIER TRADE SHOW – CARWACS U – FOR THE GROWING CONVENIENCE STORE, CAR WASH AND GAS STATION INDUSTRY, A TWO-DAY EVENT AT THE TORONTO CONGRESS CENTRE.

“Meeting hundreds of attendees,” says Kendall Miles, TSSA Regional

Supervisor for Liquid Fuels Safety, “my team of inspectors and I had an opportunity to discuss important fuel safety issues with contractors, gas station owners and several members of the Ontario Petroleum Contractors Association (OPCA)

With OPCA's annual general meeting at the same locale, Mike Scarland, TSSA Operations Manager for Fuel Safety was able to deliver a relevant speech on the

importance of partnership, such as exists between professional associations like OPCA and TSSA in its regulatory role. After a beneficial roundtable discussion, OPCA members hit the trade show.

With over 300 exhibitors and over 5,000 attendees, the CARWACS U Conference proved to be a shining success, and TSSA was pleased to be a part of such a high octane event.



Existing Unapproved Commercial or Industrial Equipment

Standards to certify and approve equipment and codes for proper installation are fundamental to our safety system; however, TSSA realizes that there may be existing commercial and industrial equipment operating in Ontario which do not have approval. TSSA is equally aware that companies need to be able to conduct their daily business without major costly interruptions.

When certificate holders and contractors find equipment lacking approval, the first evaluation is whether the equipment poses an immediate hazard. If it does, the fuel supply must be terminated and

the distributor, owner and operator notified. If it does not pose an immediate hazard, the owner, operator and distributor must be notified that the equipment must be approved, become compliant, within a period of no greater than 90 days.

If the equipment cannot be approved within the specified time, the owner/operator may apply for a variance to allow the continued operation of the equipment provided its continued safe operation can be demonstrated.

Typical conditions of the variance include:

- a TSSA pre-inspection with a certificate holder to understand the

nature of the equipment;

- a follow-up TSSA inspection with a certificate holder to evaluate the safe operation of the equipment;
- a schedule with specific timelines for the equipment to be approved (normally a TSSA field approval); and
- every 90 days while unapproved equipment operates, an inspection by a certificate holder with a report to TSSA confirming the equipment's safe continued operation.

For more information on this variance process, please see Advisory FS-122-08 on

Seasonal Alert:

PROPANE-FUELLED PORTABLE CAMP HEATERS

Spring is finally upon us, and that means camping season is just around the corner. To best ensure the safety of campers, hunters, fishing parties and outdoor enthusiasts, TSSA would like to remind readers that portable camp heaters are not permitted to be used indoors. This restriction is applicable across Canada, not just Ontario.

If such heaters are used indoors (as in a tent, trailer or cabin), you put yourself and your fellow campers at risk of serious injury. Portable camp heaters, and any other fuel-burning appliance for that matter, produce potentially deadly by-products in the process of combustion, one of which is carbon monoxide (CO). If vented into a living space – it could be deadly for all involved. Unfortunately, there have been incidents of portable heater use inside tents and trailers,

resulting in CO exposure and, in some cases, death. Any fuel-burning appliance must be vented to the outside.

To further increase public safety and raise greater awareness of this issue, TSSA will continue its public education campaign in its upcoming *SummerSmart* program, by distributing informational booklets in partnership with the Office of the Ontario

Fire Marshal and a network of firefighters across the country. Further fuel safety messaging will reach readers across the province through local media, and on TSSA's safety information site at www.safetyinfo.ca.

For further fuel safety enquiries, please contact TSSA at 1-877-682-TSSA (8772) or www.tssa.org.

IF SUCH HEATERS ARE USED INDOORS (AS IN A TENT, TRAILER OR CABIN), YOU PUT YOURSELF AND YOUR FELLOW CAMPERS AT RISK OF SERIOUS INJURY. PORTABLE CAMP HEATERS, AND ANY OTHER FUEL-BURNING APPLIANCE FOR THAT MATTER, PRODUCE POTENTIALLY DEADLY BY-PRODUCTS IN THE PROCESS OF COMBUSTION, ONE OF WHICH IS CARBON MONOXIDE.



MANDATORY UPGRADE TRAINING FOR EQUIPMENT MECHANICS AND SITE OPERATORS

With the adoption of the new *Liquid Fuels Handling Code 2007* on September 1, 2007, additional training is deemed essential to best ensure the continued safe handling, storage and dispensing of liquid fuels. Significant changes to the code include: new requirements for leak

This training is required to be completed by December 31, 2008. If the noted certificate holders do not complete the upgrade training, their certificate will not be renewed.

detection, environmental management, single wall piping, highway tanks and remotely monitored sites.

This update training is required to be taken by the holders of the following certificates:

- **Petroleum Equipment Mechanic 1;**
- **Petroleum Equipment Mechanic 2;**
- **Petroleum Equipment Mechanic 3;**
- **Petroleum Equipment Mechanic 4; and**
- **Site Operator.**

This training is required to be completed by December 31, 2008. If the above certificate holders do not complete the upgrade training, their certificate will

not be renewed. It is a one-day training session and a list of the accredited trainers across the province is available on TSSA's website at www.tssa.org. Check under 'Mechanic and Technician Certification – Training Providers'.

TSSA and industry understand that certificate holders are the front line of safety and compliance, and believe that well trained, well informed, competent technicians are necessary to best ensure safety and exceptional service to their customers and public.

Take a **TIP** from Boxall Heating

TSSA recently responded to a CO incident in Eastern Ontario. An Ottawa homeowner called a local service company with a typical 'no heat' situation.

When the technician arrived, he found the problem was simple: the homeowner's daughter had mistakenly shut the furnace switch off. Simple fix – turn it back on and head to the next call... in and out in less than ten minutes.

However, the homeowner mentioned that the family had been feeling ill over the last couple of weeks. The comment threw up a red flag for the technician and he decided to have a closer look. Since the high efficiency forced air gas furnace was now running, the technician took a few living space CO measurements and immediately knew

something was wrong. 37 ppm of CO was found after fifteen minutes of furnace run-time. Upon further investigation, the technician found a separated joint in the ABS exhaust piping with products of combustion venting directly into the living space.

The technician reported it immediately and was put in direct contact with an on-call TSSA inspector. After the technician described the situation, the inspector immediately approved the removal and replacement of the venting system. The technician made the repairs on the spot, re-fired the furnace, checked it all over and gave it a clean bill of health. Knowing the occupants had been exposed to CO, medical attention was suggested as a prudent precaution, which resulted in two adults and one child being successfully treated for level one CO

poisoning.

By simply listening to the client, using properly calibrated measuring tools and taking the time to correctly diagnose a system, a technician can offer the very best in public safety. Knowing that one's work allows a family to sleep safely and soundly is something for which a technician can and should be proud. Brian and Adam Boxall of Boxall Heating in Ottawa certainly can. They made the call and did the right thing.

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BBQ Propane Cylinder Valves: Paint Contaminated Relief Valves

Concerns have been raised after observing several examples of QCC1 valves from 20-pound propane cylinders that have been paint contaminated by spraying the opening of the pressure relief valve cavity. When cylinders are painted over, preventive methods to avoid spray from entering the opening of the pressure relief valve must be implemented. This type of contamination can adversely affect the safe operating performance of the pressure relief valve. The relief valve is a mandatory safety device installed on all propane containers designed to provide relief in the event of overpressure of the container contents. It is necessary to



ensure the proper function of this safety feature is not reduced or inhibited by foreign materials or contamination. A simple procedure of covering the cylinder relief valve during the painting operation prevents paint overspray from entering the relief valve cavity and potentially inhibiting the operation of the valve.

If this preventive action is not taken and the relief valve has been painted, safety is compromised and the cylinder should be returned to its original refurbisher or reconditioner. Manufacturers recommend the valve be inspected each time the container is filled but no less than once a year. The inspection must include specific attention to paint, tar, ice and grease that can impair the valve function. If

there is any doubt about the condition of the valve, it must be replaced.

PROPANE RELIEF VALVE MANUFACTURER RECOMMENDATIONS

Moisture, Foreign Particles or Contaminants in the Valve:

Foreign material such as paint, tar or ice in relief valve parts can impair the proper functioning of the valves. Grease placed in the valve body may harden over time or collect contaminants, thereby impairing the proper operation of the relief valve.

DO NOT PLACE GREASE IN THE VALVE BODY. REPLACE THE VALVE IF THERE ARE ANY INDICATIONS OF MOISTURE OR FOREIGN MATTER IN THE VALVE.

Additional information can be obtained in *CGA Pamphlet S-1.1 Pressure Relief Standards — Cylinders, Section 9.1.1.* as well as *CGA Pamphlet C-6.*

RELIEF VALVES SHOULD BE INSPECTED EACH TIME THE CONTAINER IS FILLED BUT NO LESS THAN ONCE A YEAR. IF THERE IS ANY DOUBT ABOUT THE CONDITION OF THE VALVE, IT MUST BE REPLACED.

Toronto-Based Company Pleads Guilty to Safety Violations

A Toronto-based company, 398701 Ontario Ltd., operating as Structural Restoration, pled guilty to one count of employing uncertified staff to install heating vents, contrary to provincial requirements under the *Technical Standards and Safety Act, 2000* (the Act), and Ontario Regulation 212/01, Gaseous Fuels (Regulation).

The Ontario Court of Justice in Kitchener fined the defendant \$10,000, plus the 25% Victim Surcharge.

Structural Restoration was charged with using uncertified employees in the installation of heating vents in a multi-

unit residential building at 400-440 Strasburg Road in Kitchener.

In October of 2005, the property management company discovered

“This conviction should send a clear, compelling message of safety to the community and all across the province,” ... “In Ontario, all persons providing fuel services must possess valid certification. This is integral to our safety system.”

improperly connected heating vents as well as furnaces plugged with insulation. Upon investigation, TSSA determined that Structural Restoration had not taken reasonable precaution of ensuring any of its agents or employees held a Gas Technician Certificate as required by Regulation.

“This conviction should send a clear, compelling message of safety to the community and all across the province,” says John Marshall, Director of TSSA’s Fuels Safety Program. “In Ontario, all persons providing fuel services must possess valid certification. This is integral to our safety system.”

Elgin Construction Fined for Kitchener Pipeline Damage

Elgin Construction recently pled guilty to a serious public safety violation, contrary to Ontario Regulation 210/01 (Oil and Gas Pipeline Systems) under the *Technical Standards and Safety Act, 2000* (the Act). The Ontario Court of Justice in Kitchener fined the defendant \$20,000, plus the 25% Victim Surcharge, given the circumstances of the case.

In June 2006, TSSA investigated damage done to a natural gas pipeline at a road reconstruction site on King Street East in downtown Kitchener. Responding to a call from Kitchener Utilities, it was determined that Elgin Construction had damaged a three-quarter inch service tee on a six-inch main gas pipeline with a swing shovel,

Bringing charges against companies or individuals for failing to follow proper safety procedures is part of TSSA’s safety mandate, and strongly reinforces its prosecution objectives to deter violators and increase public safety.

causing the release of natural gas at a rate of 40 pounds per square inch. Elgin Construction was subsequently charged with interfering with or damaging a pipeline without the authority to do so.

Although the construction company had received a locate of the pipeline and its

location was clearly marked, Elgin Construction did not hand dig within three feet of those markings as required by the TSSA’s Guidelines for Excavations.

Bringing charges against companies or individuals for failing to follow proper safety procedures is part of TSSA’s safety mandate, and strongly reinforces its prosecution objectives to deter violators and increase public safety.

TSSA also leads efforts to develop best practices and works with partners such as the Ontario Regional Chapter of the Common Ground Alliance to implement a certificate for utility locators, support underground infrastructure information and prevent future pipeline incidents.

Due Diligence

By Stu Seaton, Regional Supervisor, Fuels Safety Program

Due diligence: two words that employers are going to hear more of and they are not just buzz words. Due diligence can spell the difference between an operation's success and its right to operate. *The Technical Standards and Safety Act, 2000* (the Act) states in section 41: *Every contractor and employer shall take all reasonable precautions to ensure that they and their agents and employees comply with this Act, the regulations or a Minister's Order. 2000,c.16, s.41.*

How does section 41 impact you? There are four levels of law that regulate the fuels industry. If you were to envision this as a flow chart, you would see the Act at the top of the chart, followed by Ontario regulations or Minister's Orders, then various codes adopted by Ontario regulations, and finally manufacturer's certified installation instructions which are effectively the same as code. An example for the natural gas industry would be:

- **The Technical Standards and Safety Act, 2000**
- **Gaseous Fuels Ontario Regulation 212/01**
- **Ontario Regulation 215/01 (Fuel Industry Certificates)**
- **Code CAN/CSA B149.2 and/or Manufacturer's Certified Installation Instructions**

As an inspector, I am often puzzled that a few contractors will be very conscious of the code yet not have any knowledge of the Act or Ontario regulations. Without an understanding of all levels of regulation, a contractor will be operating blindly and compromising safety. Allow me to illustrate this with a common job site issue.

An employer hires a new employee or

sub-contractor, and he offers a certificate as proof of qualification which the employer accepts. The new employee or sub now starts work. Has the contractor practiced due diligence? No. Ontario Regulation 212/01, section 11 states:

Duty of employer

11. (1) *Every person who operates, installs, removes, repairs, alters or services appliances or works shall instruct the person's employees to comply with the Act and this Regulation. O. Reg. 212/01, s. 11 (1).*
- (2) *Every person who employs a person to carry out any activity referred to in subsection (1) shall take every precaution that is reasonable in the circumstances to ensure that the person's employees comply with the Act and this Regulation. O. Reg. 212/01, s. 11 (2).*

Note the term 'reasonable in the circumstances'. Without employer documentation indicating that this responsibility has been diligently discharged, the new employee or sub, who may be just arriving at a job site, is substantially elevating the employer's liability. Did the employer confirm that the certificate is in fact valid? A documented call to TSSA would confirm validity. Does the employer have a record of training that verifies the new employee or sub has been instructed on company policy and procedures and field work procedures? Has the new employee signed a document confirming that all work will be conducted in compliance with the Act, regulations, code and manufacturer's certified instructions? The employer must also conduct audits to ensure employees are complying with

the Act, regulations and code.

Remember that a certificate simply provides the holder with a basic level of knowledge. Contractors perform different types of work (crop dryers, special effects, residential appliances, etc). The employer cannot assume that the new employee is familiar with that specific type of work and equipment. Did the employer take the time to assess the new employee prior to sending him to his first independent call? Once the employee is hired, is training provided to cover new regulations and changes to equipment technology?

Exercising due diligence generally boils down to documentation – for both the employer and the employee. A pen and notebook is the most powerful tool in any toolbox, yet it is often the most neglected.

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In the case of an incident, the very first thing a TSSA inspector will look at will be all the documents pertaining to the job. If nothing has been documented then it will be very difficult for an employer, employee or sub to defend their work. A common example is the alteration of a venting system by another that causes a CO incident.

continued on page 8

Due Diligence

continued from page 7

Employer 'A' installs an appliance in a compliant manner. Other parties alter something, perhaps by raising grade in the process of landscaping. Inspection of the incident leads the inspector back to Employer 'A'. According to the evidence, the inspector is going to want answers as to why the vent was installed too close to grade. Employer 'A' states that the vent was installed with adequate clearance. The next question from an inspector will be: "Do you have documentation?" If an employer can demonstrate that due diligence has been exercised by supplying documentation indicating the job was installed by

qualified technicians – as per code and manufacturer's installation instructions – the inspector will then look elsewhere for the root-cause of non-compliance.

What has due diligence done for Employer 'A'? Possibly saved him from:

- regulatory orders being issued;
- prosecution under the Act; and
- a liability insurance claim.

It also likely provided a solid defence in the case of civil litigation.

Become familiar with the Act and Ontario regulations available on TSSA's website at www.tssa.org.

Practice due diligence with your own documentation and demand the same from your employees or sub-contractors. Pens, notebooks and better still, digital cameras, are relatively inexpensive compared to being left open to enforcement or civil action.

This is to be used as a guide. Employers are advised that due diligence depends on audits and reasonable checks. You must ensure you have appropriate controls in place to deal with your situation.

RECALL ALERTS

Greenheck Fan Corporation Recall Indirect Gas-Fired Furnaces

Greenheck has voluntarily recalled about 1,500 indirect gas-fired furnaces due to a faulty ignition control module that prevents the unit from shutting down in high temperature conditions. While no incidents or injuries have been reported, this poses a risk of fire, as well as the potential release of hazardous fumes from burning or melting insulation.

The Greenheck Fan Indirect Gas-Fired Furnaces models in question are PVF, PVFH, IGX, IG, ERH and ERCH. Please

note, however, that only units with ignition control module model number **35-615922-125** are included in the recall. All models were manufactured in the United States and were sold through Greenheck sales representatives to mechanical contractors between November 2006 and October 2007. It is known that a number of units were sold in Ontario. TSSA would advise consumers to stop using the recalled units immediately.

To find the model name, check on the control center door or the furnace door. Property managers or job sites that have not been contacted by Greenheck Fan should contact the company.

Contact Greenheck Fan at (800) 931-6579 between 8:00 a.m. and 5:00 p.m. CT, Monday - Friday, or visit the firm's website at www.greenheck.com.



We welcome your comments and story ideas for future editions of this newsletter. Please contact:

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