

Village of Hines Creek Council Request for Decision (RFD)

Meeting:	Regular Council Meeting
Meeting Date:	December 11, 2018
Originated By:	Leanne Walmsley, Chief Administrative Officer
Title:	Delegation – Colleen Graham
File:	0101

BACKGROUND/PROPOSAL:

Time: 9:00 A.M.

Colleen Graham is concerned about the location of a propane tank in the neighbor's back yard on the west end of the Village. She feels that it is too close to her trailer. She called Alberta Public Safety and they told her the tank had to be 10 feet from the property line. She suggested Public Works do a pin locate so she could find the property to measure from, she would notify us if she wanted it done.

We have nothing in our bylaws pertaining to propane heat.

In Canada, provincial authorities regulate the storage and handling of propane, as well as facilities, contractors, equipment and appliances that use propane. This includes administering and enforcing safety codes and standards, inspections, licensing and permits for the propane industry.

Larry Robinson from Alberta Safety Codes informed us:

- All horizontal tanks need a tank set permit
- Tanks between 125g-100g need to be 10 feet from the property line, 10 feet from any building and 10 feet from any source of ignition.

Belinda from Bluewave informed us:

- She has spoken to both landowners and propane tank owner has informed her that he was going to get a skid steer and move the tank before it was filled.
- They have not hooked up the tank yet.
- Belinda said they did not to her knowledge need a permit unless the Village of Hines Creek requires one.

RECOMMENDED ACTION:

That Council receive the delegation of Colleen Graham and its contents as information and monitor the placement of the propane tank.

Initials show support- Reviewed by:	Manager:	C.A.O. <i>AW</i>
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Propane Regulation Authorities Having Jurisdiction



Canadian Propane Association | Association canadienne du propane

Propane Storage & Handling

In Canada, provincial authorities regulate the storage and handling of propane, as well as facilities, contractors, equipment and appliances that use propane. This includes administering and enforcing safety codes and standards, inspections, licensing and permits for the propane industry.

Please contact the appropriate authority below for advice on regulatory matters:

ALBERTA Ministry of Municipal Affairs, Public Safety www.municipalaffairs.alberta.ca T: 1 866 421 6929 E: safety.services@gov.ab.ca	NUNAVUT Dept. of Community and Government Services, Protection Services www.cgs.gov.nu.ca T: 867 975-5400/5413
BRITISH COLUMBIA BC Safety Authority www.safetyauthority.ca T: 778 396 2000 or T-F: 1 866 566 7233 E: info@safetyauthority.ca	ONTARIO Technical Standards & Safety Authority www.tssa.org T-F: 1 877 682 8772 E: customerservices@tssa.org
MANITOBA Office of the Fire Commissioner – Inspection & Technical Services Manitoba www.firecomm.gov.mb.ca T: 204 945 3373 or T-F: 1 800 282 8069 E: firecomm@gov.mb.ca	PRINCE EDWARD ISLAND Dept. of Environment, Labour & Justice, Environment Division, Inspection Services www.gov.pe.ca/environment T: 902 368 5280
NEW BRUNSWICK Dept. of Public Safety, Technical Inspection Services www2.gnb.ca T: 506 453 3992 E: DPS-MSP.Information@gnb.ca	QUEBEC La Régie du bâtiment www.rbg.gouv.qc.ca T-F: 1 800 361 0761
NEWFOUNDLAND & LABRADOR Dept. of Government Services, Engineering and Inspections Division www.servicent.gov.nl.ca T: 709 729 2747	SASKATCHEWAN Gas Inquiries: SaskPower www.saskpower.com T-F: 1 877 757 6937 option 5 E: geis@saskpower.com
NORTHWEST TERRITORIES Dept. of Public Works & Services, Electrical/Mechanical Safety www.pws.gov.nt.ca T: 867 920 8801	Boiler & Pressure Vessel Inquiries: Technical Safety Authority of Saskatchewan www.tsask.ca T-F: 866 530 8599
NOVA SCOTIA Dept. of Labour & Advanced Education – Technical Safety Division www.novascotia.ca/lae/publicsafety T: 902 424 5721 or T-F: 1 800 559 3473	YUKON TERRITORY Dept. of Community Services, Building Safety Branch www.community.gov.yk.ca T: 867 667 5741 T-F: 1 800 661 0408 local 5741 E: buildingsafety@gov.yk.ca

Transportation & Cylinders

Transport Canada administers and enforces the *Transportation of Dangerous Goods (TDG) Act & Regulations*, which specify requirements for transporting propane, such as means of containment, safety marks, training, permits and emergency response assistance plans.

For questions on these subjects, contact the TDG regional office below or CANUTEC at 613-992-4624:

Atlantic 1-866-814-1477

TDG-TMDAtlantic@tc.gc.ca

Quebec 1-514-283-5722

TMD-TDG.Quebec@tc.gc.ca

Ontario 1-416-973-1868

TDG-TMDOntario@tc.gc.ca

Prairie & Northern 1-888-463-0521

TDG-TMDPNR@tc.gc.ca

Pacific 1-604-666-2955

TDGPacific-TMDPacific@tc.gc.ca

Weights & Measures

Measurement Canada is the authority responsible for ensuring equity and accuracy where goods and services are bought and sold on the basis of measurement.

www.ic.gc.ca

E2 Plans

Environmental Emergency (E2) Regulations, administered and enforced by Environment Canada, mandate persons who own/manage specified toxic/hazardous substances at or above specified thresholds to provide quantity information.

www.ec.gc.ca

Propane Storage Tank Placement

Location of above-ground tanks for consumer applications limited to vapour withdrawal and/or liquid withdrawal to a vaporizer. As per CAN/CSA-B149.2-05 – Propane Storage & Handling Code (table 7.4 below). See clauses 7.10.2 and 9.3.3 for further reference.

Please Note: This excerpt from the code book is a guide only. Consult with your Superior Propane representative for your particular project requirements and allowable propane tank placements.

Total aggregate water capacity, USWG (L)	Minimum distance, ft (m), between tank and property line; adjacent concrete or masonry building wall with no building openings within the specified clearances; or source of ignition*	Minimum distance, ft (m), between tank and building wall of other than concrete or masonry construction	Minimum distance, ft (m), between tank and building opening	Minimum distance, ft (m), between tank and adjacent tank**
Up to and including 125 (475)	None***	None	3 (1)	None
Over 125 (475) up to and including 1000 (3800)	10 (3)	10 (3)	10 (3)	3 (1)
Over 1000 (3800) up to and including 2000 (7800)	10 (3)	25 (7.5)	25 (7.5)	3 (1)
Over 2000 (7800) up to and including 5000 (19000)	15 (5)	25 (7.5)	25 (7.5)	3 (1)
Over 5000 (19000) up to and including 10000 (38000)	25 (7.5)	25 (7.5)	25 (7.5)	3 (1)
Over 10000 (38000)	****	****	****	****

* Distances to property lines may be amended by the authority having jurisdiction.

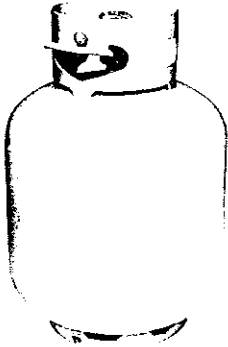
** If tanks of a multiple tank installation are installed on a common base or pier, the clearances may be reduced at the discretion of the authority having jurisdiction.

*** 10 ft (3 m) from any source of ignition.

**** At the discretion of the authority having jurisdiction.



Dangerous misuse of propane cylinders



Albertans have always been innovative and creative in the way they approach solving problems. While this is an especially important quality to have for life on the farm, there are instances when this can put you and the people around you at considerable risk.

Recently in Alberta, a farmer used a 20-pound propane cylinder to melt ice from his cattle's drinking trough. It was the same kind of cylinder you use to fuel the family barbecue, and its improper use had tragic consequences

Propane cylinders are only designed to store and handle propane. When they're used for other purposes than their intended safe design, a number of dangerous things happen to the cylinders that you can't see with the naked eye. Learn why you should never use propane cylinders for anything other than handling and storing propane.

Safety standards

When a 20-pound propane cylinder is manufactured, it meets specific requirements set out by the Canadian Standards Association. This includes the design, testing, repair, and rebuilding of cylinders to transport propane. Anyone manufacturing, rebuilding or repairing the cylinder must follow the rules in the standard.

Metal fatigue

The 20-pound cylinders are made from a specific type of manufactured carbon steel, with grain structures that can be seen under a microscope. When the steel is heated or subjected to higher pressures than the cylinder was originally designed to withstand, there is stress and strain put on the grain structure and tiny movement occurs within the metal itself. This may form a crack that can't be seen by the naked eye. When this stress and strain is applied many times the crack will become larger, the material can become fatigued and it will lose its strength and burst open. This is similar to when you bend a paper clip back and forth until it breaks – it's called metal fatigue.



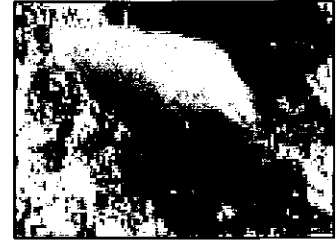
Example of microscopic cracks in propane tank metal, caused by heat damage.

Risk of corrosion

Another reason these cylinders can only be used for propane storage and transportation is the risk of corrosion, or rust. When a propane cylinder is used for other purposes, such as filling the cylinder with water and heating it up, or using the cylinder to hold compressed air, the moisture formed in the cylinder will start the corrosion process. Corrosion will affect the thickness of the metal and strength. It will weaken the ability of the cylinder to hold gas or liquid under pressure, which can further weaken the cylinder to the point of rupturing.

Danger of steam

Making modifications to the cylinder so it can be used to heat water to produce steam is extremely dangerous. When water changes from a liquid to steam, it expands 1700 times its size. When the heated water is contained in a closed cylinder it cannot expand. This puts extreme stress on the steel and can cause it to burst open, sending fragments everywhere.



Metal fragment from the fatal 2016 propane cylinder explosion.

Danger of compressed air

Reusing a propane cylinder to hold compressed air has its own dangers. When air is compressed, it creates heat. After the air is added to the propane cylinder, the air starts to cool and condense, forming moisture that will cause corrosion. The metal will start to get eaten away from the inside of the cylinder, further weakening the metal.

Nozzle safety

In addition to the cylinder itself, the opening for the valve fitting assembly, or nozzle, is also an important part of the safe design of a propane cylinder. If a hole is cut in a cylinder and a nozzle inserted, there is no reinforcement, to strengthen the cylinder opening. According to the Canadian Standards Association approved design, the head of the cylinder is only designed for one nozzle, using a standard valve fitting. No other nozzles are allowed to be added, at any time during the life of the cylinder.

Welding on the propane cylinder

Welding is not allowed on the cylinder, unless you are the manufacturer following the requirements of the safety standard. Welding will shrink the cylinder material by approximately 7% and creates stress on each side of the weld. It can cause cracks that weaken the cylinder material and can potentially put you at risk of the cylinder rupturing.

The fatal accident

In early 2016, a farmer attempted to unthaw frozen ice in a cattle trough using two 20-pound propane cylinders. The farmer was not aware of the safety risks of using the cylinders in this way. The farmer



Photograph from the 2016 fatality investigation showing the top of the ruptured propane cylinder.

was using one of the propane cylinders to make steam and the other cylinder was used to fuel a tiger torch that was the heat source for the cylinder making steam.

The cylinder used for the production of steam catastrophically failed, resulting in explosive shrapnel that struck the farmer and caused a fatal injury. Propane cylinders are not designed for generating steam and it is unsafe and illegal to use propane cylinders for purposes other than the intended safe design.

If you're using a propane cylinder for any other purpose than the design intends, you should stop immediately and return the cylinder to one of the nearest propane supply companies. Help make sure you and your family stay safe.