

## Incident Summary #II-155531-2023 (#35654) (FINAL)

SUPPORTING INFORMATION	Incident Date	May 27, 2023	
	Location	Salmon Arm	
	Regulated industry sector	Gas - Propane system	
	Impact	Qty injuries	1
		Injury description	First degree burns to the lower part of their body and were admitted to the hospital for medical treatment.
		Injury rating	Moderate
	Damage	Damage description	Some charring and burning of combustible materials around the area of the open gas line inside the trailer.
		Damage rating	Minor
	Incident rating	Moderate	
Incident overview	A worker was inside a mobile food trailer with propane fueled cooking appliances. While attempting to light the pilot light of a gas appliance, a gas leak occurred from an open gas line which ignited causing burns to the individual.		
INVESTIGATION CONCLUSIONS	Site, system and components	<p>Gas systems for mobile outdoor food service equipment including food trailers are required to be installed by certified gas contractors under installation permits.</p> <p>In 2018 the propane gas system in the trailer was originally installed by a certified gas contractor under an installation permit. The installed gas equipment included a deep fryer, a grill, and a char-broiler. Fuel was supplied to the appliances from two portable propane cylinders mounted on the front of the trailer. A manifold distributed individual gas lines to the appliance each controlled by their own gas shut off ball valve.</p> <p>The <a href="#">Gas Safety Regulation</a> identifies that a person must not perform <i>regulated</i> work in respect to a gas system unless authorized or permitted to do so. <i>Regulated</i> work includes the <i>alteration</i> of gas systems and equipment. The <a href="#">Safety Standards Act</a> defines “<i>alteration</i>” as: <i>adding to, replacement and removal</i>.</p> <p>The CSA B149.1 gas code states that when an appliance is not connected to an outlet of a piping system, the outlet shall be made tight by means of a plugged valve or a cap or plug compatible with the material of the piping or tubing system.</p>	
	Failure scenario(s)	<p>The owner of the mobile food trailer, who was not a qualified gas fitter, had removed the propane char-broiler from the system but did not cap the copper gas line inside the trailer and relied on the shut off ball valve for the line to stop the flow of gas. The shut off valve was not effectively closed when the propane gas cylinders were turned on and the pilot light for the deep fryer was attempting to be lit with an open flame. Gas escaped from the open gas line for the old char-broiler and mixed with the air to create a combustible fuel air mixture that was ignited and started on fire. The worker inside the trailer received first degree burns and was admitted to hospital for treatment.</p>	

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Facts and evidence	<p>Owner statements:</p> <ul style="list-style-type: none"><li>• They had removed the char-broiler and did not cap the copper gas line that went to it.</li><li>• They are not a qualified gas fitter.</li><li>• When the worker was inside attempting to light the pilot light for the deep fryer next to the open gas line, gas escaped from the open line and ignited burning the worker who was hospitalized for their injuries.</li></ul> <p>Site observations:</p> <ul style="list-style-type: none"><li>• The gas system was originally installed and approved in 2018.</li><li>• The gas lines to the appliances were distributed from a manifold and each line has its own shut off ball valve.</li><li>• A deep fryer and grill were installed in the trailer, but the char-broiler had been removed.</li><li>• A ½" copper gas line was observed in the trailer with a flared end and no cap or plug installed.</li></ul>
Causes and contributing factors	<p>The cause of the incident was very likely the release of propane gas from a gas line left uncapped after the alteration of the gas system following the removal of the char-broiler by the uncertified owner.</p>



Image 1 – Mobile food trailer.



Image 2 – Propane cylinders on front of trailer.

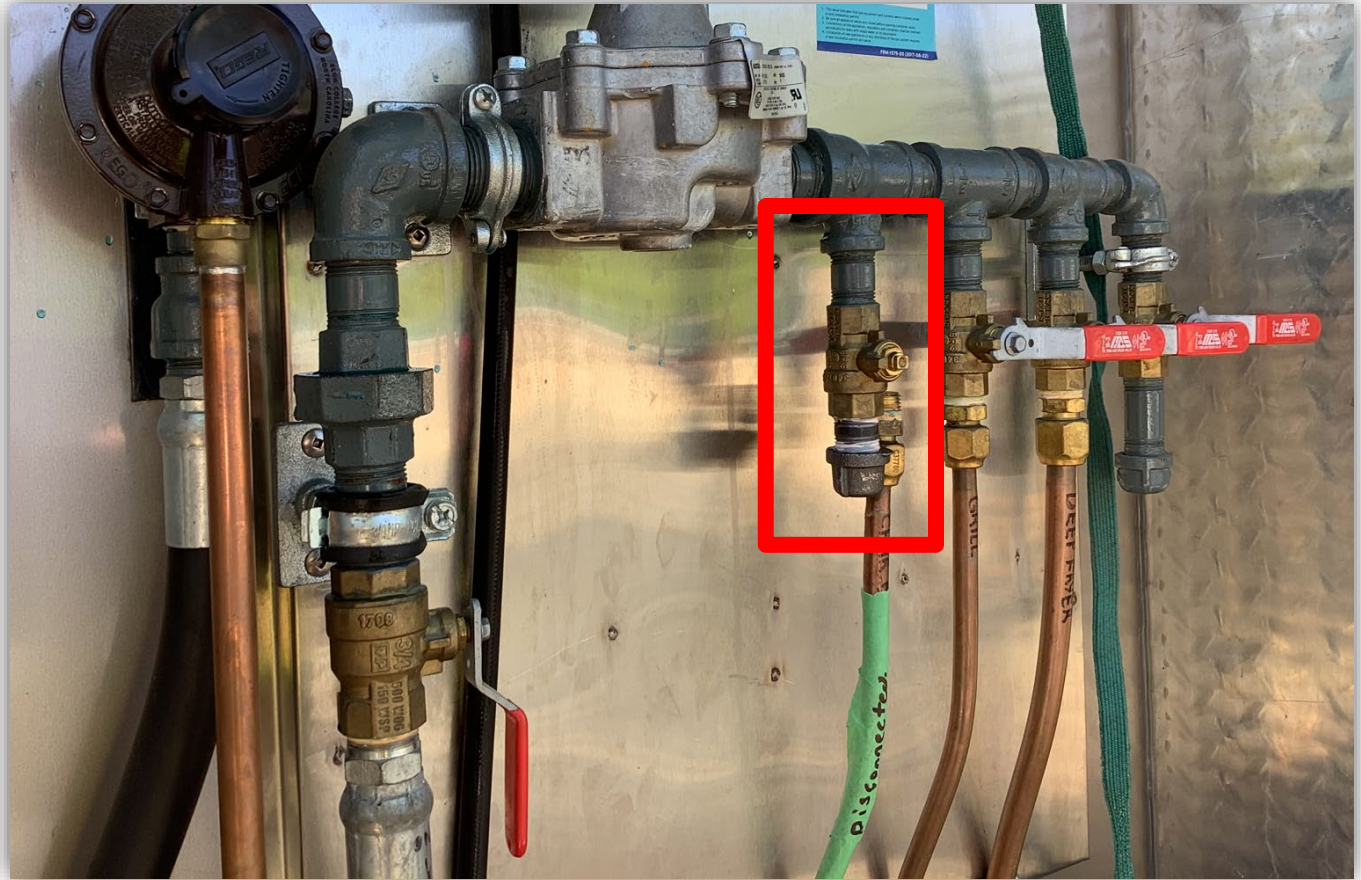


Image 3 – Gas lines from manifold. [RED] Capped gas line to char-broiler after incident with the shut off handle removed. (When the incident occurred, the line was connected, and the handle was on the valve.)



Image 4 – Uncapped gas line previously connected to the char-broiler.



Image 5 – Fire damage behind gas appliances.