Incident Summary (Reference #II-651245-2018)

SUPPORTING INFORMATION	Incident Date		February 12, 2018
	Location		Port Coquitlam
	Regulated industry sector		Gas (Natural gas system)
	Impact – Injury	Qty injuries	None
		Injury description	None
		Injury rating	None
	Impact – Damage	Damage description	The glass panel on the front of the fireplace shattered.
		Damage rating	Moderate
	Incident rating		Moderate
	Incident overview		The piece of equipment that failed was a residential gas fireplace. During lighting of the appliance a small explosion occurred causing the glass panel on the front of the fireplace to shatter.
INVESTIGATION CONCLUSIONS	Site, system and components		This gas fireplace uses a manually ignited gas pilot burner. By pushing down on a control knob in the pilot position, gas flows from a pilot valve to the pilot burner and a push of the spark button attempts to light the pilot burner. A flame sensor called a thermocouple proves the pilot is lit and the user switches the control knob to the “on” position which allows gas to flow through the main burner and the pilot will light the main burner of the fireplace.
	Failure scenario(s)		During the lighting of the fireplace a large amount of gas was introduced into the inside of the fireplace before the manual spark ignitor was pressed. Once the ignitor was pressed and a spark was introduced, it ignited the gas inside the fireplace, this created an explosion.
	Facts and evidence		- Fireplace had been operating earlier in the day of incident. - Was informed by homeowner and confirmed with contractor that fireplace had been serviced and tested 2 weeks prior to incident.
	Causes and contributing factors		It is very likely that the cause of the explosion in the fireplace was due to the pilot valve being held or stuck open for an extended period of time before attempting to light the pilot burner with the spark ignitor. If the spark ignitor is pressed in this condition it is very likely an explosion would occur inside the fireplace.