

## Incident Summary #II-1413698-2022 (#28974) (FINAL)

SUPPORTING INFORMATION	Incident Date	July 29, 2022	
	Location	Port Coquitlam	
	Regulated industry sector	Electrical - Low voltage electrical system (30V to 750V)	
	Impact	Qty injuries	0
		Injury description	No Injuries
		Injury rating	None
	Damage	Damage description	Arcing and fire damage to an exterior electrical receptacle which was beyond repair, there was also smoke and fire damage to the vinyl siding around the receptacle located on the exterior second floor deck of a single-family dwelling.
		Damage rating	Minor
	Incident rating	Minor	
Incident overview	While pressure washing the exterior of a single-family dwelling, water entered into an exterior receptacle which was provided with a dry location cover. The high-pressure spray of water created shorting between the energized components and grounded components of the receptacle leading to overheating and/or arcing causing the fire which damaged the receptacle and exterior siding.		
INVESTIGATION CONCLUSIONS	Site, system and components	<p>When receptacles are installed on the exterior of building's they are required to be installed with covers that prevent moisture from entering the receptacle and device box. Today's electrical code requires the covers for standard 120volt 15amp and 20amp receptacles, which are the most common provided outside of buildings to have either a wet location cover only when the cover is closed when the receptacle is installed in an area which is protected from weather or a wet location cover marked extra duty suitable whether or not a plug is inserted into the receptacle where exposed to the weather.</p> <p>The exterior deck was provided with a 120volt 15amp ground fault circuit interrupter receptacle and provided with a dry location cover. It was fed by a three-wire circuit protected by a 2pole 15A circuit breaker in the main panelboard located in the attached garage.</p>	
	Failure scenario(s)	While the exterior of the building was being cleaned with a pressure washer which utilizes a high-pressure water spray to remove dirt and grime; water was able to enter an exterior receptacle in an area being pressure washed. The exterior receptacle was provided a dry location cover which does not prevent the ingress of water, this caused water to enter the receptacle and device box, making contact between the energized and grounded parts resulting in shorting, arcing, overheating and subsequent fire.	
	Facts and evidence	-The tenant stated they had pressure washing performed on the exterior of the building and that same day noticed black marks on the siding above the receptacle and a burning smell	

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	<ul style="list-style-type: none"><li>-The tenant stated the next day after the pressure washing, they noticed a larger area on the siding above the receptacle was burnt and black and called 911</li><li>-Nothing was plugged into the exterior receptacle at the time of the incident</li><li>-The fire department indicated the circuit breaker feeding the receptacle was still in the on position and then was turned off by their crew</li></ul>
Causes and contributing factors	It is highly probable that the incident was caused by water being sprayed from the pressure washer towards the receptacle. The provided dry type receptacle cover plate, which is not designed to prevent moisture ingress was a contributing factor.



Image 1 – Exterior deck receptacle with dry location cover.



Image 2 – Damage to exterior siding and receptacle