

Incident Summary #II-984565-2020 (#16730) (FINAL)

SUPPORTING INFORMATION	Incident Date	February 10, 2020	
	Location	Peace River Region	
	Regulated industry sector	Boilers, PV & refrigeration - Boiler and pressure vessel system	
	Impact	Qty injuries	0
		Injury description	None
		Injury rating	None
	Damage	Damage description	Paint was baked off the spools, and the heater had no resistance (was shorted to ground).
		Damage rating	Moderate
Incident rating	Moderate		
Incident overview	<p>On February 10, 2020 fuel gas was turned off from the Buyback heater unit ID H-6500 FG Heater serial number W082815-01 between 10:20 to 14:30 hrs. During this time that the gas flow was shut off to the heater and the heater continued to operate. The buyback heater shut down 9 times due to high temperature. Operations did not note this as a concern. This heater then operated normally for 2 days until it stopped working on February 12, 2020 at 16:45 hrs. Operators discovered that the paint was baked off the pipe; and after further analysis, determined that the heater had no resistance and was shorted to ground.</p>		
INVESTIGATION CONCLUSIONS	Site, system and components	<p>The gas buyback heater uses electrical heating elements in a heat exchanger configuration to increase the temperature of the fuel gas when it is flowing from the sales gas pipeline (buyback) for operational fuel gas purposes within the facility.</p> <p>This heater is utilized to preheat the fuel gas to start the plant following an outage, but may not be used consistently when the plant is fully up and operational. The maximum allowable working temperature of the heat exchanger is 200 degrees C.</p>	
	Failure scenario(s)	<ul style="list-style-type: none"> - Operators did not investigate (TIT-6502) alarms - High temperature shut down TIT-6502 did not shut the unit down 	
	Facts and evidence	<ul style="list-style-type: none"> - Records show that the buyback heater tripped on high sheath temperature (TIT-6502) 9 times. - the heater operated for 2 days, after the unit had tripped 9 times on February 10th until it shorted out on Feb 12, 2020. 	
	Causes and contributing factors	<p>It is probable that the high temperature shut down (TIT-6502) set to shut the heater down at 250 degrees centigrade instead of at, or below the maximum allowable working temperature of the heater design of 200 degrees centigrade contributed to this failure .</p>	



Buy back heater overview – Red Circle shows high temperature shut down TIT-6502



External heat damage to unit