

Incident Summary (II-676281-2018) (Ref. # 6824) (Final)

SUPPORTING INFORMATION	Incident Date	April 11, 2018	
	Location	Peace River Region	
	Regulated industry sector	Boiler, Pressure Vessel and Refrigeration	
	Impact Injury	Qty injuries	None
		Injury description	None
		Injury rating	None
	Damage	Damage description	None
		Damage rating	None
Incident rating	Minor		
Incident overview	During season end maintenance at an ice arena facility, an ammonia sensor failed a calibration test. A detector sensor was relocated from another piece of equipment in the system to be used as a temporary replacement. This second sensor also failed and caused an ammonia alarm to be activated.		
INVESTIGATION CONCLUSIONS	Site, system and components	The ammonia sensors are routinely function tested to ensure accurate detection of ammonia leakage in the refrigeration system. This sensor upon detecting an ammonia leak causes an alarm to be activated in order to evacuate occupants from the building.	
	Failure scenario(s)	- Ammonia sensors failed after previously functioning in service	
	Facts and evidence	<ul style="list-style-type: none"> - Ammonia sensors failed calibration test by licensed contractor - A check of the refrigeration equipment by qualified staff resulted in no actual ammonia leak in the refrigeration system - A written procedure by staff for ammonia detector function testing indicates to conduct the sensor function test using an ammonia cleaner or actual test gas - An ammonia cleaning product was reported as being used instead of test gas 	
	Causes and contributing factors	- The person in charge confirmed that staff had been using an ammonia cleaning product to function test the leak detector sensors which may have contributed in the failure of the ammonia sensors.	

Photos or diagrams (if necessary)



Ammonia cleaner product used in function testing sensors.