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The *Workers Compensation Act* requires that the employer must post a copy of this report in a conspicuous place at or near the workplace inspected for at least seven days, or until compliance has been achieved, whichever is the longer period. A copy of this report must also be given to the joint committee or worker health and safety representative, as applicable.

Inspection Report #202621072904A		
Employer Name	Jobsite Inspected	Scope of Inspection
UNIVERSITY OF VICTORIA	3964 Gordon Head Road Victoria BC V8N 3X3	Incident Response

Date of Initiating Inspection	Date of This Inspection	Delivery Date of This Report	Delivery Method
Sep 02, 2026	Sep 02, 2026	Sep 02, 2026	Email

THERE ARE ZERO (0) ORDERS OR OTHER ITEMS OUTSTANDING

ACTION MAY STILL BE NECESSARY TO ENSURE COMPLIANCE
PLEASE READ FULL REPORT

Summary of Orders or other Items		
See "Orders/Items – Full Details" section of this Inspection Report for orders/items cited		
Order/Item No.1 ☒	Status: Complied	Cited: OHS5.68

ORDER STATUS LEGEND	
Order Status	Description
Outstanding	Order Outstanding - Action Required to Achieve Compliance
Complied	Compliance Achieved - No Further Action Required
Closed	Order is Closed
Rescinded	Order has been cancelled - No Further Action Required

INSPECTION NOTES

On September 2, 2026, WorkSafeBC occupational hygiene officer Marion Wylie (author) attended the University of Victoria's Ian Stewart Complex, located at 3964 Gordon Head Road, Victoria, British Columbia, in response to a reported carbon monoxide exposure incident involving a Zamboni ice resurfacer, model 446, serial number 11150 (Zamboni), that occurred on September 1, 2026.

This inspection report is intended to be read in conjunction with Inspection Report IR202621072905A, which documents the associated stop use order for the Zamboni ice resurfacer, model 446, serial number 11150.

The following is a brief description of the incident and incident response performed by the employer.

On September 1, 2026, a facility attendant supervisor was operating the Zamboni while resurfacing the ice. A facility attendant in training was present and observing the work. After approximately one hour of operation, a facilities worker advised them that an unusual exhaust odour had been detected within the facility. The supervisor subsequently left the ice surface to remove accumulated ice. When they attempted to re-enter the area, they reported noticing an usual exhaust odour and contacted the facility operations coordinator.

The facility operations coordinator requested that the shift engineer attend the site with a four-gas monitor. Air monitoring conducted by the shift engineer identified elevated carbon monoxide (CO) concentrations adjacent to the Zamboni exhaust and within the facility. The building was immediately evacuated and emergency response procedures were implemented. The local fire department attended the site and conducted additional atmospheric monitoring, detecting elevated carbon monoxide concentrations in the ice rink area, including readings of approximately 400 ppm within the change room areas. Three workers were adversely affected by the incident, assessed by paramedics, and one was transported to hospital for further evaluation. Ventilation measures were initiated, including opening exterior doors, operating the building ventilation system, and positioning fans to exhaust contaminated air from the facility. The fire department subsequently confirmed that the facility was safe for re-entry at approximately 2:00 p.m. The area in the Ian Stewart Complex (the ice rink side) remained closed and locked until the time of the inspection. The other side of the building, that has a separate HVAC system and did not ever show elevated carbon monoxide levels was closed on September 1, 2026, and re-opened September 2, 2026.

I met with four employer representatives and two worker representatives, and the CUPE 917 president to discuss the incident, the response measures taken, and the status of the employer's investigation.

The following are observations and discussions:

- The facility attendant supervisor described the events leading up to the incident, including the operation of the ice resurfacer for approximately one hour prior to concerns being raised regarding an unusual exhaust odour.
- The halocarbon manager advised that the employer has a fixed carbon monoxide monitoring and alarm system installed within the ice rink facility. The employer's post-incident review determined that the system had not generated an alarm despite elevated carbon monoxide concentrations being present within the building.
- The halocarbon manager advised that the employer's investigation identified that the carbon monoxide monitoring system had been configured to display carbon monoxide concentrations using an incorrect measurement parameter rather than parts per million (ppm). As a result, the alarm system did not activate as intended. The employer further advised that the alarm had not been configured as a critical alarm despite this being the original design intent for the system (**See Order 1**).
- The facility attendant supervisor demonstrated the process used prior to operating the ice resurfacer. The supervisor advised that, before starting the Zamboni, the operator activates a ventilation system by pressing a push-button control.
- Discussions with employer and worker representatives identified uncertainty regarding the purpose and operation of this ventilation system, including whether the system is intended to provide exhaust ventilation within the Zamboni

storage room, general ventilation for the ice rink area, or both. The employer was unable to clearly explain the design intent, airflow characteristics, or the areas serviced by the system.

- The facility attendant supervisor advised that the push-button ventilation control activates the system for approximately 15 minutes before automatically shutting off.
- The employer advised that ice resurfacing activities are typically conducted twice per week and involve operation of the Zamboni for approximately one to two hours per resurfacing cycle. Discussions were held regarding whether a 15-minute ventilation cycle is adequate to control or remove contaminants generated during the full duration of ice resurfacing activities, particularly where an internal combustion engine is operated indoors. The employer advised that this issue would form part of its ongoing investigation and review of engineering controls.
- The facility operations coordinator advised that the employer's practice is to send the Zamboni for maintenance every two years. The employer was unable to provide information demonstrating that this maintenance interval is consistent with the manufacturer's specifications or that engine emission levels had been verified as part of the maintenance program.
- Discussions were held regarding the requirements of OHSR section 5.73(a), which requires that mobile equipment powered by an internal combustion engine and operated indoors or in an enclosed work area be adequately serviced and maintained to minimize the concentration of air contaminants in the exhaust (**See IR202621072905A**).
- The emergency planner advised that other potential sources of carbon monoxide within the building, including the boiler system, had been investigated. Real-time monitoring data and building carbon monoxide monitoring records reportedly corresponded with periods when the Zamboni was operating and indicated that the Zamboni exhaust was the source of the elevated carbon monoxide concentrations.
- The operation of the Zamboni resulted in carbon monoxide concentrations sufficient to require evacuation of the facility and intervention by emergency responders. Carbon monoxide is a toxic atmospheric contaminant capable of causing serious illness, loss of consciousness, or death when generated in enclosed workplaces.
- At the time of inspection, the employer had not provided information demonstrating that any of their ice resurfacing equipment with internal combustion engines had been maintained in accordance with the manufacturer's recommendations, that engine emissions had been assessed and found acceptable for continued indoor operation, or that the ventilation and alarm systems intended to protect workers were functioning as designed and effective for the work being performed.
- The employer advised that an incident investigation is underway. Employer representatives were advised of the requirements to complete a preliminary employer incident investigation report within 48 hours and a full employer incident investigation report within 30 days of the incident.
- The employer was requested to provide copies of air monitoring results, carbon monoxide alarm system configuration and testing records, maintenance records for the ice resurfer, the employer's investigation findings, and documentation supporting any corrective actions implemented as a result of the incident.

At the time of inspection, the employer's investigation remained ongoing. The root cause of the elevated carbon monoxide concentrations had not yet been conclusively determined. Questions also remained regarding the adequacy of the maintenance program for the ice resurfer, the effectiveness of the ventilation systems associated with ice resurfacing operations, and the failure of the fixed gas detection system to provide a warning despite hazardous carbon monoxide concentrations being present within the facility.

Based on the elevated carbon monoxide concentrations identified during the incident, the determination that the source of the carbon monoxide was the Zamboni exhaust, the significant risk of worker exposure to a toxic atmospheric contaminant, the failure of the fixed alarm system to provide notification, uncertainties regarding the adequacy of ventilation controls, and the absence of information demonstrating that the equipment had been adequately maintained to minimize exhaust emissions, there were reasonable grounds to believe that continued operation of internal combustion engine-powered ice resurfacers at this workplace presented a high risk of serious injury, serious illness, or death to workers.

As such, a stop work order was issued on September 2, 2026 at 9:45 AM. Prior to the issuance of this inspection report the employer representative submitted their compliance package. See Order 1 for further details.

References

Refer to the Regulation References section of this report for further details regarding applicable requirements discussed during the inspection.

Additional resources or publications referenced:

- [Conducting an employer investigation - WorkSafeBC](#)
- [Reference Guide for Employer Incident Investigations | WorkSafeBC](#)
- [Employer incident investigations \(EIIR\): Online reporting tool | WorkSafeBC](#)

If you have any questions regarding this report, please contact:

Marion Wylie

WorkSafeBC - Prevention Field Services - Victoria B.C.

Desk: 250.881.7272

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The WorkSafeBC prevention phone line is 1.888.621.7233 (621- SAFE) toll free in British Columbia.

ORDERS/ITEMS

An employer who fails to comply with Occupational Health and Safety ("OHS") provisions of the *Workers Compensation Act*, the Occupational Health & Safety Regulation, or WorkSafeBC orders may be subject to monetary or other sanctions as prescribed by the *Workers Compensation Act*.

Orders/Items - Full Details

Order/Item No.1 ☒	Status: Complied	Cited: OHS5.68
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The employer did not ensure that a means of warning affected workers of a failure of the exhaust ventilation system was provided where failure of the system would result in a hazard that is not readily apparent.

The following evidence supports this order:

- The employer advised that operators activate a ventilation system using a push-button control prior to operating the Zamboni.
- Employer representatives were unable to clearly explain the purpose, operation, design intent, airflow characteristics, or areas served by the ventilation system. It was unclear whether the system provided ventilation for the Zamboni storage area, the ice rink, or both.
- The employer advised that the ventilation system operates for approximately 15 minutes before automatically shutting off, while ice resurfacing activities typically require operation of the Zamboni for approximately one to two hours.
- On September 1, 2026, operation of the Zamboni resulted in elevated carbon monoxide concentrations within the facility, including concentrations reported to be approximately 400 ppm in change room areas, requiring evacuation of the building and response by emergency services.
- The employer advised that the fixed carbon monoxide monitoring and alarm system did not activate during the incident despite elevated carbon monoxide concentrations being present within the facility.
- At the time of inspection, the employer had not demonstrated that workers would receive a warning in the event the ventilation system failed, shut down, or was otherwise ineffective while the Zamboni was operating indoors.
- Carbon monoxide is a colourless, odourless toxic gas and the development of hazardous concentrations may not be readily apparent to affected workers.
- The facility attendant supervisor told me that they did not detect an odour until they had exited the building and then re-entered.

This is in contravention of the Occupational Health and Safety Regulation Section 5.68.

If failure of an exhaust ventilation system would result in a hazard that is not readily apparent to affected workers, the system must be equipped with a device or other means to warn those workers in the event of system failure.

Measures to Ensure Compliance:

On September 2, 2026, the employer representative emailed me the following compliance submission:

- In response to the Stop Work order issued, the following steps have been put in place by UVic to monitor carbon monoxide in Ian Stewart.
- While the the Zamboni is turned on, the operator will have a personal direct read CO monitor. We will set the alarm to 20ppm as a safety point and have procedures for both 20ppm and 25ppm (attached).
- The CO sensor has been calibrated and is using the correct units now (ppm) for the building alarm system. The system has been set to a critical alarm that is continually monitored by Facilities Management and rings through to Campus Security if the sensor measures 25ppm CO.

Orders/Items - Full Details

- An additional safety measure was put in place where the HVAC unit will automatically begin exhausting if the building CO sensor measures 15ppm, and then shuts down when it reaches 5ppm.
- We confirmed that the push button exhaust in the Zamboni room runs both the exhaust for the Zamboni room and the general ice rink and turns on the exhaust for 15 mins once the button is pressed. Staff have been trained to push the button every 15 minutes while operating the Zamboni.

Please let us know if any additional information is required or if this is sufficient CO monitoring procedures to resume work with the Zamboni that was not involved in the incident.

The Zamboni involved in the incident remains out of order with the Stop Use sign attached. Both Zambonis are scheduled to be inspected Friday and I will email that report once it is complete.

Attached to this email were written procedures for workers to follow in the event of carbon monoxide alarms on either the personal monitor or the building monitor.

This order has been complied based on the documentation submitted.

REFERENCES

In addition to any orders, or other items, and the information provided in the Inspection Notes section in this Inspection Report, the officer may discuss other health and safety issues with the employer arising out of the inspection. The information below sets out the health and safety requirements discussed with the employer, and unless otherwise noted, violations of these requirements were not observed.

Reference	Details Discussed
WCA90(1) If subsection 90(2) or 90(3) applies, the Board may order that (a) work at a workplace or any part of a workplace stop until the order to stop work is cancelled by the Board, and (b) if the Board considers this is necessary, the workplace or any part of the workplace be cleared of persons and isolated by barricades, fencing or any other means suitable to prevent access to the area until the danger is removed.	Work activity was temporarily stopped during the inspection until the compliance submission was received.

Employer #	Mailing Address	Classification Unit #	Operating Location
80391	OCCUPATIONAL HEALTH SAFETY & ENVIRO PO BOX 1700 STN CENTRAL VICTORIA BC V8W 2Y2	765010	001

Lab Samples Taken	Direct Readings	Results Presented	Sampling Inspection(s)	Workers onsite during Inspection	Notice of Project Number
N	N	N		6	

Inspection Report Delivered To	Employer Representatives Present During Inspection	Worker Representatives Present During Inspection	Labour Organization & Local
Lori Zehr	Lori Zehr Rob Johns Jaclyn Davidson Jesse Neville	Quy Nguyen Paul Mason	CUPE 917

WorkSafeBC Officer Conducting Inspection
Marion Wylie

*Inspection Time	*Travel Time
1.5 hrs	0 hrs

*The time recorded above reflects the inspection time and travel time associated with this inspection report and includes time spent on pre and post-inspection activities. Additional time may be added for subsequent activity.

Request a Review

Any employer, worker, owner, supplier, union, or a member of a deceased worker's family directly affected may, within 45 calendar days of the delivery date of this report, in writing, request the Review Division of WorkSafeBC to conduct a review of an order, or the non-issuance of an order, by contacting the Review Division. Employers requiring assistance may contact the Employers' Advisers Office at 1-800-925-2233.

To submit a request online, visit <https://www.worksafebc.com/en/review-appeal/submit-request>

WorkSafeBC values your feedback. To obtain that feedback, an external market research provider may be contacting you to complete a survey.

WorkSafeBC's online services provide employers with tools to view information and to complete a variety of transactions with us in an easy, fast, and secure way. Through an online services account, you can view and download your inspection reports and compliance agreements, submit Employer Incident Investigation Reports, view your Health & Safety Planning Tool Kit, and more. Visit [worksafebc.com](https://www.worksafebc.com) to log in or create an account.