
	Outdoor Air Quality Guideline	Revision	
	Public Document	00	Date
			2021-08-06
			Annual
North Atlantic Projects Group Plan for ZERO HARM			

Vale North Atlantic Project Group

Outdoor Air Quality Guideline

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1.0 Context

Outdoor air is referred to as ambient air. Outdoor air pollution is made up of a mixture of gases and fine particles produced from emissions, combustion processes, industrial sources, and when wood / organic material burns. The inhalation of fine particles and other air pollutants may aggravate symptoms particularly for an individual with pre-existing respiratory and cardiovascular disease.

2.0 Purpose

The purpose of the guideline is to protect workers when working outdoors and when the Air Quality Health Index (AQHI) is equal to or greater than 4.

3.0 Scope

The guideline applies to the North Atlantic Projects Group.

4.0 Symptoms and Risk Exposure


The potential for adverse health effects depends on the proximity to the source of pollution (ie: fire, highways), level and duration of exposure, age of the workers, individual susceptibility, therefore not everyone exposed to smoke will be affected in the same way.

Smoke and air pollutants may cause, sore throat, eye irritation, runny nose, mild cough, phlegm production, wheezing and headaches

General Population: A healthy worker exposed to smoke for short periods of time symptoms are likely to be temporary.

At Risk Populations: Workers with pre-existing conditions such as respiratory and cardiovascular diseases, pregnant women, older population may experience more serious or acute symptoms such as shortness of breath, severe persistent coughing, dizziness, chest tightness and heart palpitations.

Hazard Awareness: Other hazards associated with air pollutions and smoke include visibility and heat stress / heat exhaustion (Temperature / Humidity). Initiate a work / rest schedule appropriate for the type of work and environmental conditions and adjust the schedule based on a 1-hour cycle. Stay hydrated by drinking water.

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5.0 Risk Ranking and Messages

The Risk Ranking is derived from the Environment Canada -Air Quality Health Index (AQHI). The higher the AQHI value, the greater the level of air pollution and the greater the health concern.

The Air Quality Health Index (AQHI) provides hourly air quality readings and related health messages. The AQHI reports on the health risks posed by a mixture of pollutants, including:

- Particulate matter (PM 2.5)
- ground-level ozone (O3)
- nitrogen dioxide (NO2)


The rating for the AQHI is based on the combination of the health risks from each of the pollutants in the index.

Environment Canada issues an AQHI forecast two times per day for most regions and cities in Canada.

5.1 Risk Ranking AQHI Scale

The AQHI is measured on a scale of 1 (low) to 10+ (very high). The AQHI index values are grouped into four categories that help you to easily and quickly identify your level of health risk:

- Low Health Risk: AQHI values from 1 to 3
- Moderate Health Risk: AQHI values from 4 to 6
- High Health Risk: AQHI values from 7 to 10
- Very High Health Risk: above 10 (A very rare occurrence usually connected to wildfire smoke)

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5.2 Risk Ranking Messages

The following table provides the health messages for 'at risk' individuals and the general public for each of the AQHI Health Risk Categories.


Health Risk	Air Quality Health Index	Health Messages	
		At Risk Population*	General Population
Low	1 - 3	Enjoy your usual outdoor activities.	Ideal air quality for outdoor activities.
Moderate	4 - 6	Consider reducing or rescheduling strenuous activities outdoors if you are experiencing symptoms.	No need to modify your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.
High	7 - 10	Reduce or reschedule strenuous activities outdoors. Children and the elderly should also take it easy.	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation.
Very High	Above 10	Avoid strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion.	Reduce or reschedule strenuous activities outdoors especially if you experience symptoms such as coughing and throat irritation.

* People with heart or breathing problems are at greater risk. Follow your doctor's usual advice about exercising and managing your condition.

6.0 Exposure Control

The following are recommendations to limit exposure to workers during poor outdoor air quality conditions;

- Limit outdoor activities as much as possible. Reschedule activities for days with a low risk rating.
- Keep windows and doors closed to prevent outdoor air from coming inside as much as possible.
- Turn off air conditioning units that pull air from outdoors into the building.
- Limit strenuous outdoor activities whenever possible.
- **Monitor Symptoms; If symptoms from poor air quality persist or become increasing worse over time without improvement, report to your Supervisor and report to first-aid.**
- Reschedule outdoor work activities for another day or another time with a lower AQHI rating.
- Take regular scheduled breaks if you must work outdoors and limit strenuous activities, such as manual lifting, for another day of possible.
- Proper respirator protection if required.
- Monitor the direction of the wind from the source when planning work.

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*Review the weather bulletin, weather conditions (temp / humidity and wind directions) every morning and throughout the day as the environmental conditions may change.
 Reference: Environment Canada.

Resources:

- https://weather.gc.ca/airquality/pages/onaq-041_e.html
- <http://www.airqualityontario.com/aqhi/today.php?sites=77233>
- http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/BCCDC_WildFire_FactSheet_FaceMasks.pdf
- http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/BCCDC_WildFire_FactSheet_HowToPrepare.pdf
- <https://open.alberta.ca/interact/aqhi-canada>

Download the AQHI Canada App

- https://play.google.com/store/apps/details?id=ca.ab.gov.nationalaqhi&hl=en_CA&gl=US
- <https://apps.apple.com/ca/app/aqhi-canada/id1020320494?OCID=MY01SV&form=MY01SV>