

Summary of Ice Arena Rules

Applicability

All indoor ice arenas are covered by these rules effective 5/20/2013.

Acceptable Air Quality

- Acceptable air quality limits are one-hour average concentrations:
 - Carbon monoxide (CO): ≤ 20 ppm
 - Nitrogen dioxide (NO₂): ≤ 0.3 ppm
- Acceptable air quality must be maintained throughout the arena building when open to the public.

Certification

All indoor arenas must apply for certification from MDH **annually**.

Training Requirements

- A trained responsible person must be present in the arena building when open to the public.
- Responsible persons must be provided training annually, and the training must be documented.

Air Testing Equipment

Electronic and “pump and tube” style monitoring devices are permitted. All air monitoring devices must be used, stored, and calibrated according to manufacturer specifications. Continuous monitoring systems may be permitted and need MDH approval.

Measuring Air Quality

Combustion-Powered Resurfacers:

- Measurements of CO and NO₂ need to be taken at least **twice per week** after resurfacer use.
- At least one of the two sets of measurements must be on a Saturday or Sunday.

Fuel-Burning Edgers:

- Measurements must be taken at least **once per week** after edger use.
- If using the edger when the arena is open to the public, testing is required 20 minutes after use.
- If the arena is closed to the public, testing can be done any time prior to opening to the public.

Recordkeeping Requirements

Arenas must maintain a recordkeeping log for all required documents. The log needs to be kept in the arena building and available for MDH and the public to review during the arena’s operating hours.

Required documents include:

- Air Quality Measurement Logs
- Training Records
- Measuring Device Records
- Corrective Action Reports

When CO and/or NO₂ Levels are High

When air quality conditions do not meet the definition of acceptable air quality, arena staff must:

- Immediately increase the ventilation rate, AND
- Suspend internal combustion engine use until acceptable air quality conditions are measured throughout the building.

Follow-up testing must be performed and documented as follows:

- Test air quality every 20 minutes until acceptable air quality is measured,
- Test air 20 minutes after the next five uses of ice maintenance equipment, AND
- Test air at least once per day for the next three days.

Evacuation Conditions

The arena must be evacuated if any of the following conditions are present:

Contaminant	Reading (ppm)	Elapsed Time (minutes)
CO	> 83	> 5
CO	> 40	> 60
CO	> 20	> 120
NO ₂	> 2.0	> 5
NO ₂	> 0.6	> 60
NO ₂	> 0.3	> 120

When evacuation is necessary, the arena must contact the local fire department for assistance and notify MDH.

Evacuated areas can only be re-occupied when:

- Acceptable air quality conditions are measured,
- Corrective actions have been taken to prevent re-occurrence, AND
- MDH or the fire department has verified acceptable air quality conditions and corrective measures.

Exceedance Reporting

Any exceedance must be reported to MDH using the “Indoor Ice Arena Exceedance Report Form”. This includes:

- Why corrective action was taken in the arena,
- What corrective action was taken to reduce CO and/or NO₂ levels in the arena,
- A record of all air quality tests associated with the exceedance, AND
- An action plan to prevent reoccurrence.

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