Failure to Maintain Acceptable Air Quality

MOTORSPORTS ARENAS

The operator of an indoor motorsports arena needs to take corrective action if measurements show levels of carbon monoxide (CO) over 30 ppm or level of nitrogen dioxide (NO_2) over 0.3 ppm for more than 15 minutes. The type of corrective action depends upon the level.

Corrective actions

The decision to take corrective actions begins with a routine air quality test.

Original air test shows CO levels over 83 ppm and/or NO_2 levels over 2 ppm:

- Increase ventilation rate in the facility to maximum capacity (max HVAC operation, open doors and windows, place fans by doors, etc.)
- Begin continuous air monitoring (and document readings)
  - If CO levels are over 83 ppm or NO_2 levels are over 2 ppm continuously for more than 15 minutes, **evacuate the arena.**
  - If levels of CO are between 31-83 ppm and/or NO_2 levels are between 0.4-2.0 ppm, **continue corrective action and monitoring.**
    - If CO levels continuously remain above 30 ppm and/or NO_2 levels continuously remain above 0.3 ppm for more than **1 hour**, **suspend combustion powered equipment**.
    - If CO levels continuously remain above 30 ppm and/or NO_2 levels continuously remain above 0.3 ppm for more than **2 hours**, **evacuate the arena.**

Original air test shows CO levels between 31-83 ppm and/or NO_2 levels between 0.4-2.0 ppm:

- Begin continuous air monitoring (and document readings)
- If CO readings continuously exceed 30 ppm and/or NO_2 readings continuously exceed 0.3 ppm for **more than 15 minutes**, increase the ventilation rate in the facility
- Retest the air at least every 15 minutes and document readings until measurements are less than 30 ppm CO and/or 0.3 ppm NO_2
  - If CO levels continuously remain above 30 ppm and/or NO_2 levels continuously remain above 0.3 ppm for **1 hour**, **suspend combustion powered equipment**.
  - If CO continuously remain above 30 ppm and/or NO_2 levels remain continuously above 0.3 ppm for **2 hours**, **evacuate the arena.**

Evacuation

The operator of a motorsports arena **must** evacuate if:

- CO levels are higher than 83 ppm or NO_2 levels are higher than 2.0 ppm for more than 15 minutes.
- CO levels are higher than 30 ppm or NO_2 levels are higher than 0.2 ppm for more than 120 minutes (2 hours).

Evacuation steps:

1. Contact the local fire department for assistance.
2. Evacuate the arena.
3. Contact MDH at 651-201-4601 upon completing the evacuation.
4. Take air quality readings every 15 minutes until acceptable air quality is reached. Acceptable air quality conditions must also be verified by the fire department or MDH.
5. Reoccupy the arena.
6. Follow the directions on the Motorsports Arena Exceedance Report Form to complete the required follow-up testing.

Follow-up testing

When corrective actions or evacuation have occurred, arena staff must complete follow-up testing and submit a report to MDH within 5 business days. Please use the MDH Indoor Motorsports Arena Exceedance Report Form.

- Arena operators must test at 15-minute intervals for at least 1 hour per day for the next 3 days of arena operation.
- Report the following information:
  - Explain why corrective action was taken.
  - Describe the corrective action taken. (Increasing ventilation, suspending use of combustion equipment)
  - A record of all air tests associated with the exceedance.
  - An action plan to prevent a reoccurrence. This plan shall be signed by all responsible arena staff.

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Updated 12/3/2025

To obtain this information in a different format, call: 651-201-4601.