

WEEK 42 LATE OCTOBER • ~5 MIN READ • ONTARIO CONSTRUCTION

Setting Up Temporary Heat & Enclosures

As the first cold snaps hit, the tarps go up and the propane heaters come on so the work can keep moving. The trouble is that the same enclosure that holds the heat in also holds in carbon monoxide, and a heater set too close to the poly is a fire waiting to start. Both are avoidable if we set the heat up right.

The hazard

Fuel-fired heaters — propane and kerosene — consume oxygen and give off carbon monoxide, a gas you can't see or smell that can put someone down before they know anything's wrong. Wrap a space in poly to hold the heat and you trap that gas along with it. On top of that, a heater running close to tarps, lumber, or rags is a real ignition source, and propane cylinders leak or fail if they're handled or stored wrong. Ontario requires a fuel-fired heating device to be located, protected, and used so there's no risk of igniting a tarpaulin, a temporary enclosure, or nearby combustibles; it must not be used in a confined or enclosed space without adequate combustion air and adequate general ventilation; it has to be protected from damage and from overturning; and it must not block a way out. Propane on site falls under Ontario's propane rules on top of that. Meeting all that on paper isn't enough on its own — the crew has to set the heat up that way every time and keep watching it once it's running.

What to do

- ▶ **Use a heater rated for the space:** Only run heaters approved for indoor or enclosure use with that fuel. An outdoor-only heater inside a wrapped space is how CO builds up fast.
- ▶ **Run it the way its label says:** Enough combustion air, real general ventilation, and the clearances the manufacturer calls for. **A heater built to vent its combustion products outside has to actually vent outside — and never rig your own ducting on one that isn't built for it.** Direct-fired units put their products into the space, which is exactly why the ventilation is not optional.
- ▶ **Ventilate even when it's cold — the one people fight:** A sealed enclosure is exactly what traps CO, so keep fresh air moving through even though it costs you some heat. In a big or heavily wrapped space, a flap in the tarp isn't enough — if natural airflow can't keep the air fresh, put a fan or blower on it to actually turn the air over. Warm and sealed is the dangerous combination.
- ▶ **Keep the clearances, and keep the exit clear:** Hold heaters well back from tarps, wood, and anything that burns, at the distance on the heater's label. Don't push it into a corner against the poly to free up floor space, and don't set it where it blocks the way out. Protect it from being knocked over or driven into.
- ▶ **Extinguisher — know the rating:** Every fire extinguisher on an Ontario project has to be a pressurized type with a ULC rating of **at least 4A40BC**. A 2A:10B:C unit does not meet that. Keep one at readily accessible, clearly marked locations — including wherever fuel-fired equipment is running — charged, tagged, and protected from damage and freezing. Anyone who may have to use one needs to have been trained on it.
- ▶ **Put a CO alarm in every heated enclosure,** placed and checked the way its instructions say. CO is about the same weight as air, so it won't pool low like propane or shoot up like smoke — it mixes right where you're breathing. **Know what the alarm is, though: a hardware-store unit is built to catch a household emergency and can sit quiet at levels already past the workplace limit. It's a backstop, not an air test.** Where the air in there could actually be bad, that's an assessment for your employer to make — and if there's an engine running in the space, the air has to be tested for CO by a competent worker under the employer's written testing strategy.

- ▶ **Handle propane right:** Cylinders stored and stood upright, secured, and clear of exits, doorways, and traffic. **Separation distances and where cylinders may be kept come from the propane code and your site's approved storage arrangement — use those figures, not a remembered number.** Storage indoors isn't automatically banned, but it's only ever in an arrangement that actually meets those rules; what's never acceptable is the casual version — a cylinder in a trailer, a gang box, or the back of an occupied truck.
- ▶ **Leak-check:** Check hoses and connections with soapy water — bubbles show you a leak safely, with no risk of setting off the gas you're hunting for.

Watch out for

- ▶ Headache, dizziness, nausea, or feeling drowsy — treat these as CO until proven otherwise, get out into fresh air, and don't send anyone back in until it's ventilated and re-checked.
- ▶ A heater shoved against the poly or a combustible to make room, or sitting where it blocks the way out.
- ▶ Cylinders left lying down, unsecured, or in the path of a door or a forklift.
- ▶ **An extinguisher that's the wrong rating, out of date, or buried behind material** — a 10-pound unit that nobody can reach is not a control.

Talk it over

- ▶ Does our enclosure have a working CO alarm and a real fresh-air opening right now — and does anyone here think that alarm is the same thing as testing the air?
- ▶ Where's the nearest extinguisher, what's its rating, and who here has been trained to use it?



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