

SAFE WORK PRACTICES

PREVENTING FIRES

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**This information does not take precedence over OH&S. All employees should be familiar with the Saskatchewan Employment Act and the OH&S Regulations.*

General: Fire can break out on most work sites. Not only can people be killed or injured, but fires can also be financially devastating to those involved. The information contained in this safe work practices deals mainly with small sites, where risks are relatively low (but it should not be assumed that risks are low merely because a site is small). In addition to taking steps to prevent fires happening, measures must be taken to ensure all people at the work site (including visitors) are protected if they do occur.

Preventing Fire Occurring:

Most fires have simple causes and can be dealt with by simple precautions. The following are particularly important:

1. Make sure LPG cylinders and flammable materials are properly stored. LPG should be stored outside buildings in well-ventilated and secure areas. Flammable materials such as solvents and adhesives should be stored in lockable steel containers.
2. LPG supplies should be turned off at the cylinder when not in use. This is particularly important after working hours. Serious explosions can occur when job trailers gradually fill with gas because an LPG heater has not been turned off. Also make sure job trailers are adequately ventilated and do not keep LPG in them.
3. Make sure that LPG equipment and fittings are properly maintained. Damaged hoses and fittings or makeshift connections are extremely dangerous because they can easily lead to leaks.
4. If there is any suspicion that LPG is leaking **stop** using it and check. Leaks can be identified by hissing, smell or using soapy water, but **never** with a naked flame. Only light up when you are certain that there are no leaks and that any vapor which has leaked has dispersed.
5. Follow clear rules for hot work such as welding. Formal work permits are often appropriate. In particular, make sure extinguishers are at hand and that sparks or heat cannot set fire to surrounding materials. After the work has finished, check the worksite to make sure that there is not smoldering.
6. Keep a tidy site and make sure rubbish is cleared away promptly and regularly.

7. Avoid unnecessary stockpiling of combustible materials, e.g. polystyrene, and store what is necessary away from ignition sources. Limit what is taken onto site to what is needed for a day's work.
8. Consider the need for special precautions in areas where flammable atmospheres may develop, such as the use of volatile solvents or adhesives in enclosed areas.
9. Avoid burning waste materials on site wherever possible. **Never** use gasoline or similar accelerants to start or encourage fires.
10. Make sure everyone abides by site rules on smoking.

Site rules for preventing fire are useless unless they are followed. Supervisors should monitor their worksites and take appropriate action when breaches are found.

Preparing for Fire if it Happens:

Fires can grow extremely rapidly. If a construction fire occurs the primary aim is to ensure that **all** those on site reach safety as soon as possible. Delay can be fatal. Site staff may need to fight a fire to enable their escape, but tackling larger fires is the fire department's job.

Raising the Alarm: If fire breaks out the alarm should be raised as soon as the first person discovers it. The type of alarm needed can range from a simple shout of "fire", to manual bells or klaxons or to sophisticated automatic systems. Whatever system is chosen make sure that it:

- can be heard by **everyone** working on site over normal background noise;
- will work when needed (check that existing building alarm systems have not been disconnected if you rely on them during refurbishment work);
- can be activated **immediately** (delay can be fatal).

Means of Escape: Work sites can pose particular problems if routes in and out are incomplete and/or obstructions are present. Open sites usually offer plentiful means of escape and special arrangements are unlikely to be necessary. In enclosed buildings people can easily become trapped, especially where they are working above or below ground level. In such cases means of escape need careful consideration. Make sure that:

- wherever possible, there are at least two escape routes in different directions;
- travel distances to safety are reduced to a minimum;

- enclosed escape routes, for example corridors or stairwells, can resist fire and smoke from the surrounding site. Where fire doors are needed for this make sure they are provided and kept closed (self-closing devices should be fitted to doors on enclosed escape routes);
- escape routes and emergency exits are clearly signed;
- escape routes and exits are kept clear. Emergency exits should **never** be locked when people are on the site;
- emergency lighting is installed if necessary to enable escape. This is especially important in enclosed stairways in multi-storey structures which will be in total darkness if the normal lighting fails during a fire;
- an assembly point is identified where everyone can gather and be accounted for.

Fire Fighting Equipment: The equipment needed depends on the risk of fire occurring and the likely consequences if it does. It can range from a single extinguisher on a small low-risk site to complex fixed installation on large and high-risk sites. Whatever equipment is needed make sure that:

- fire equipment is located where it is really needed and is easily accessible;
- the location of fire-fighting equipment and how to use it is clearly indicated;
- the right sort of extinguishers are provided for the type of fire that could occur. A combination of water or foam extinguishers for paper and wood fires and CO₂ extinguishers for fires involving electrical equipment is usually appropriate;
- the equipment provided is maintained and works. Fire-fighting equipment should be checked regularly by a competent person – often from the manufacturer;
- those carrying out hot work have appropriate fire extinguishers with them and know how to use them.

Emergency Plans: The purpose of emergency plans is to ensure that everyone on site reaches safety if there is a fire. Small and low-risk sites only require very simple plans, but higher risk sites will need more careful and detailed consideration. An emergency plan should:

- be available before work starts;
- be up to date and appropriate for the circumstances concerned;
- make clear who does what during a fire.

On larger high-risk sites fire drills may be appropriate. On smaller sites:

- you should know what **you** need to do if there is a fire;
- supervisors need to make sure that everyone on their sites knows what to do;
- regular checks should be made to ensure that fire precautions are in place.

Providing Information: Fire action notices should be clearly displayed where everyone on site will see them, for example at fire points, site entrances or canteens.