Fire Prevention Compliance Game Plan

The 5 things to do to control workplace fire hazards and comply with OHS requirements.

Hundreds of workers die in workplace fires each year. Consider these sobering numbers:

200

200

The average number of workers killed in workplace fires each year;

5000

5000

The average number of workers seriously injured in workplace fires each year;

200

200

The average number of workplaces in which a fire breaks out each day.

While this data come from the U.S., fire remains a significant workplace hazard in Canadian workplaces. Most workplace fires are preventable. Here’s a 5-step compliance game plan you can implement to prevent work fires and ensure compliance with OHS fire safety requirements.

Step 1: Identify Fire Hazards in Your Workplace

The first step in preventing workplace fires is to do a complete inspection of your workplace to identify physical fire hazards, including:

- The presence of flammable, combustible or explosive substances (which, for simplicity’s sake, we’ll refer to collectively as ‘flammables’);
- The presence of ignition sources, such as sparking tools, sources of intense heat or sunlight and other things that can cause flammables to ignite;
- Operations in which flammables are used, such as hot work or welding; and
- The fire safety aspects of the building’s construction, for example, ease of entry and exit, use of fire-resistant materials, occupancy levels, installation of sprinklers, etc.

Be on the lookout for the risk factors that can cause fires and explosions, including:

- Unsafe storage, use and handling of flammables;

- Overloading of electrical outlets;
- Frayed or damaged wiring or electrical equipment;
- Proximity of flammables to heat or ignition sources;
- Accumulations of combustible dusts, fumes or vapours in the air;
- Accumulations of dangerous debris such as oily rags;
- Failure of workers to follow good housekeeping practices; and
- Lack of fire safety awareness on the part of workers.

Implementation Strategy: Inspection is just the starting point. Other things you should do to identify fire hazards include:

- Observing workers while performing operations involving use of or in areas containing flammables;
- Interviewing workers and supervisors about fire hazards;
- Reviewing written records of incidents, including near misses, worker complaints and JHSC recommendations involving fire safety; and
- Seeking the advice of local fire departments and emergency responders.

Step 2: Perform Fire Hazard Assessment

Next, assess all of the fire hazards you identify in terms of how likely they are to occur, how serious the consequences would be if they did occur, and how difficult it would be to eliminate or control the hazard in terms of cost, time and disruption.

Implementation Strategy: In performing your assessment, consider the adequacy of current fire safety measures and controls, including your:

- Fire alarm and notification equipment and methods;

- Fire extinguishers and other firefighting equipment; and
- Fire emergency response and evacuation plan and procedures.

Step 3: Implement a Fire Prevention Plan

The heart of the game plan are the measures you implement to manage the fire hazards you identify in your assessment. **First Choice:** Eliminate the hazard, such as by getting rid of flammables that pose fire hazards and using less hazardous products instead. Unfortunately, elimination won't be a practicable strategy for most employers. And even if you could get rid of flammables and other hazards, no facility is ever 100% safe against the risk of fire.

Implementation Strategy: You'll have to accept the fact that your workplace and workers are exposed fire hazards and implement practical and reasonable measures to control them.

Level 1: Engineering Controls

Start with engineering controls or mechanical equipment and systems that do something to physically minimize hazards at a workplace and that meet OHS, fire and building code and other applicable standards. Engineering controls for fire and explosion include:

- Installation of HVAC and ventilation systems in buildings and flammables storage areas;
- Building design features that reduce the risk of fires, such as use of fireproof materials;
- Insulation of electrical equipment and other potential ignition sources;
- Installation of fire alarms, smoke detectors and other detection or warning devices;
- Installation of sprinklers and other fire suppression

systems; and
- Furnishing portable fire extinguishers and other firefighting equipment.

Level 2: Work/Administrative Controls

The next layer of hazard control is use of ‘work’ or ‘administrative controls affecting how different work operations are carried out. At a minimum, you must develop and implement safe work procedures for:

- Proper handling, use and storage of flammables and other hazardous materials;
- Controlling ignition sources;
- Carrying out welding, hot work and other operations involving high risk of fire and explosion;
- Controlling accumulations of flammable and combustible waste materials;
- Regular fire inspections;
- Regular maintenance of safeguards installed on heat-producing equipment to prevent accidental ignitions; and
- Fire response and safely evacuation (or, if necessary, sheltering in place), with specific measures for looking after the disabled or others needing special assistance.

Level 3: PPE & Protective Clothing

Workers exposed to risk of fire and explosion must be equipped with and use appropriate PPE and protective clothing. Workers who perform interior structural firefighting must be furnished, at no cost to themselves:

- Foot and leg protection;
- Protective footwear;
- Body protection;
- Gloves or glove systems;
- Head, eye and face protection; and
- Respiratory protective equipment.

Implementation Strategy: Engineering, work controls and PPE aren’t mutually exclusive and should be used in combination with each other.

Step 4: Provide Fire Safety & Prevention Training

Provide fire safety and prevention training to workers that covers, at a minimum:

- The major fire hazards to which workers are exposed;
- The methods used to control those hazards;
- The safe work procedures they must use to control each hazard;
- The housekeeping and sanitary requirements they must meet;
- How to conduct fire safety inspections and checks of their work area;
- Other general fire prevention information and education;
- The PPE and protective clothing they should wear;
- The alarm and detection systems in place to warn them of fire;
- How to report a fire;
- How to notify emergency personnel of a fire;
- The firefighting equipment necessary to control fire hazards; and
- The fire emergency and evacuation procedure and their role in carrying it out.

You must also have a program to educate workers on general principles of fire extinguisher use and the hazards of ‘incipient stage firefighting,’ that is, fighting fires capable of being controlled or extinguished by portable fire extinguishers or similar equipment in their early stage without the need for protective clothing or respiratory protection. Fire extinguisher education must be provided to workers when they’re first hired and at least every year after

that.

Implementation Strategy: Simply providing training isn’t enough. You must also ensure that workers actually understand and are capable of applying their training on the job. Methods of verifying the effectiveness of training include:

- Quizzing workers on the lesson after you deliver it;
- Making workers demonstrate the safe work procedures covered during the training;
- Making workers demonstrate proper use of the PPE covered during the training; and
- Staging regular drills to ensure workers are actually following their training.

Step 5: Inspect, Monitor, Reinforce and Improve Your Fire Prevention Measures

Last but not least, monitor your fire prevention and safety measures to ensure they’re effective and determine whether adjustments or corrective actions are necessary. Monitoring must be carried out on an ongoing and continuous basis and in response to:

- Worker complaints;
- Incidents and injuries; and
- Significant changes to operations, equipment, personnel etc. that your current fire prevention plan didn’t account for.

Implementation Strategy: One of the key parts of monitoring is to implement a program for inspecting and maintaining power tools at appropriate intervals. For Best Results, combine this Calendar with your regular preventive maintenance and inspection schedule for portable powered tools covered.