FIRE HAZARDS IN THE WORKPLACE: IGNITION SOURCES

INTRODUCTION

A fire needs three elements: fuel, oxygen, and an ignition source. Therefore, if you can control one of the elements, you can prevent an unwanted fire from starting in your workplace.

HOW TO IDENTIFY IGNITION SOURCES

An ignition source is any process or event capable of causing a fire or explosion. To prevent a fire or explosion, identify ignition sources in your workplace so you can be aware of them and control them. Look for:

- Radiant bar or open flame fires/heaters
- Heat sources (i.e. lamps) near combustible materials
- Multi-point adaptors or trailing socket extension leads used in conjunction with electrical sockets and appliances
- Known faults in electrical circuits
- Evidence of smoking
- Open flames (including candles)
- Evidence of “Near Misses” on the walls or electrical sockets
  - Burns
  - Discolorations
  - Scorch Marks

COMMON IGNITION SOURCES

Some common ignition sources include, but are not limited to:

- Electrical equipment
- Internal combustion engines
- Metal tools striking metal surfaces
- Spark-producing equipment
- Static Electricity
- Friction from machinery bearings and drive belts
- Chemical reactions
  - Be especially aware of the auto-ignite temperature of flammable and combustible materials
- Hot surfaces and the obstruction of equipment ventilation (i.e. copy machines)
- Hot processes (i.e. welding, cutting, or grinding)
- Faulty electrical installations

- Temporary or permanent cooking facilities
  - Sudden Decompression
  - Ovens, kilns, open hearths, furnaces or incinerators
  - Boilers, engines, and other oil burning equipment
  - Cooking equipment
  - Smoking materials (cigarettes, lighters, etc.)
  - Light bulbs
  - Light switches

CONTROLLING IGNITION SOURCES

Once you have identified the ignition sources in your workplace, you need to take steps to be sure they do not combine with fuel and start a fire:

- Keep ignition sources as far away from fuel as you can
  - Eliminate all nonessential ignition sources where flammable liquids are used or stored
- Keep flammable and combustible materials stored below their auto-ignite temperatures
- Use non-sparking tools when opening containers of flammable and combustible liquid
- Bond and ground your equipment to prevent static electricity discharge
- Do not use any ignition sources in areas with a flammable atmosphere
  - If an ignition source goes off in flammable atmosphere, an explosion is likely to result
- Only use equipment for the purpose it was intended
- Do NOT smoke in non-smoking areas

CONCLUSION

Working in the same place every day makes it easy to miss some hazards, but if you are aware of the types of ignition sources in your workplace and know to look for them, you will be able to control them and prevent unwanted fires.

Builders' Exchange
OF SANTA CLARA COUNTY

Safety Meeting Report

Employer _____

Date _____

Location _____

Meeting Supervisor _____

Safety Meeting Subject: _____

Accidents Reviewed: _____

_____

Suggestions: _____

_____

Employee's Attending

1. _____
2. _____
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