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FIRE SAFETY AUDIT
FOR COMMERCIAL BUILDINGS

"I hereby declare that this academic project is the result of my own research
except for the quotation and summary which have been acknowledged"

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ABSTRACT

Quite often if not always, it is occupants for no mistake of their own who fall victim to fire. Besides damage to their belongings and property, some occupants are burned to death for not knowing what to do in the event of fire. Even though commercial buildings are provided with the most sophisticated fire safety features, assurance of safety to building occupants is questionable and held in doubt. Fire outbreaks occur as a result of “human factors”, such as carelessness, negligence or simply a lack of fire safety awareness. A fire safety audit is, as its title implies, an inspection that uses the principles of audit as its base, but not as its sole methodology. The process of auditing a workplace, assessing risks and making enforcement decisions will embody the principles, expectations and methodology of the Enforcement Management Model (EMM). There are several benefits by implementation and enforcement of fire safety audit. For example, to ensure all fire safety devices keep running their function, to control fire from spreading to other spaces, and the most important is to make sure occupant safety in that building.

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1.0 INTRODUCTION

1.1 Introduction

Fire is the heat and light energy released during a chemical reaction, in particular a combustion reaction. Depending on the substances alight, and any impurities within, the color of the flame and the fire intensity might vary.

Fires start when a flammable and/or a combustible material with an adequate supply of oxygen or another oxidizer is subjected to enough heat and is able to sustain a chain reaction. This is commonly called the fire tetrahedron. No fire can exist without all of these elements being in place.

Once ignited, a chain reaction must take place whereby fires can sustain their own heat by the further release of heat energy in the process of combustion and may propagate, provided there is a continuous supply of an oxidizer and fuel.

Fire can be extinguished by removing any one of the elements of the fire tetrahedron. Fire extinguishing by the application of water acts by cooling the fuel to stop the reaction whilst also starving the fire of oxygen.