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**NO. MATRIK:** BS16110235

**TAJUK:** THE EFFECTS OF OPEN BURNING TO THE ENVIRONMENT

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Open burning can be defined as the burning of unwanted materials such as paper, trees and other debris, where the smoke and other emission can be directly released into the air. Thus, these act can cause pollution in the environment. It is usually done outdoors where household waste materials are burnt as a means of waste disposal, away from an incinerator or a furnace chamber. During open burning air pollutants do not pass through chimney or stack. The burnt material is then released, unregulated and released into the atmosphere in its original form. Plastic is one of the materials that contain toxic chemicals which can bring danger to the environment and health problem to people once they are pre-disposed into the air.

There are several effects of open burning on the environment. One of the effects is the smoke will pollute the environment. The released of uncontrolled smoke into the atmosphere will cause the destruction of ozone layer. Toxic fumes released by the process will not only affect the ozone layer but will also threatening the plant and animal life. Thus, this will bring a negative impact on the wildlife and the number of them will decline. Besides, the smoke emitted from open burning has an irritating odor that will harm the clean breathing air.

Other than that, open burning will cause adverse climate change. When the biomass is burned, the thick black toxic smoke will be released as it is mainly composed of carbon. The high formation of soot leads to the absorption of sunlight and reduces the reflective nature of the environment. As a result, albedo effect where the phenomena in reduced sunlight reflected back into the spaces will occur which contributes to global warming.

Moreover, open burning will increase the amount nitrogen oxide, NOx. NOx is a toxic compound that combines with other pollutants in the air to reduce the amount of oxygen, which simultaneously threatening the life of plant and trees. Plus, NOx is also a cause for global warming as it is volatile in the atmosphere. If it is released, it will cause high temperature of fire that leads to the increase of atmospheric temperature and poses as a hazard to the ozone layer.

Apart from that, open burning can lead to breathing difficulties. The burning of asbestos containing materials such as rubber products and waste paints will develop the production of toxic fumes and odorous smoke to the atmosphere. Then, those particles will combine with air resulting deep lodging in the lungs and lead to difficulties in breathing. These will lead to diseases like bronchitis, lung cancer and asthma.

Besides that, the effect of open burning is it can be a threat to the normal functioning organs like liver, brain, kidney, heart and lungs. Mercury is one of the toxic substances that released into the environment during the open burning of industrial waste and chemicals. It is then released in water that will drain in large water bodies. This will bring diseases that affect the brain, kidney, heart and lungs. Mercury also has other adverse effect in water. It is ingested by fish that either die or become mercury carriers. Fish are a source of food for most people and the ingestion of these fishes means further ingestion of the mercury.

Department of Environment (DOE) will take stern legal actions against those who carrying out open burning using existing laws such as the Environmental Act 1974. In the Section 29A of the Act, it is clearly forbids any person from conducting open burning. It states that no person shall allow or cause open burning on any premises. Any person who violates this law shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding RM5000 or to imprisonment for a term not exceeding five years or both. A maximum compound fine of RM2000 can also be imposed for every offence.

The Department of Environment under the Natural Resources and Environment Ministry has been constantly advised the public to not carrying out open burning in order to avoid any disaster. They have launched several campaign to attract the public interest about the harmful of open burning to the environment. Other than that, the officers of DOE has been persistently patrolling premises areas that are being complained by public about open burning. A warning have been given to the first timer to alert them about the regulations. The public are advised to help extinguish small fires and report any open burning to the DOE as well as the Fire and Rescue Department. They can contact the DOE at 03-88891972 or 1-800-88-2727 and the Fire and Rescue Department at 999 to report open burning cases.