Types of Radiation Pollution and Ways to Be Protected

In the 21st century, mankind has accomplished great achievements in the past few years. New technologies are being developed and elevated for the effective working of human evolution. Latest energy bases are looked for and their best abilities are harnessed by us. One of which is radioactive energy which has several uses in every division. However, this also brings a drawback; radioactive pollution. Radioactive pollution is a pressing concern as Radiation is toxic to humans and animals (Andrew, 2012). According to the international atomic energy agency (IAEA 2007), “radioactive pollution is the deposition of radioactive substances on the surface in the form of liquids or gas”. According to the same source, IAEA radioactive contaminant is when radioactive materials are disposed of close to human civilization. The purpose of this assignment is to show no matter if the radiation is natural or man-made it is still harmful to every living being and to create awareness about how human activities cause radioactive pollution. Radioactive pollution is mainly caused by humans and should be minimized as there are lethal side effects caused by natural and manmade radiation to every living cell on the surface of the earth. This assignment will contain information on what radioactive pollution means, the types of radioactive Different types of radiation pollution, how to prevent being contaminated by radiation and this research is done taking the whole globe into account. There is other research that has been done previously by other researchers such as the Environmental Protection Agency, Environmental pollution centers.org and Environmental chemistry.

Radiation pollution can be categorised by the regularity of pollution as continuous, occasional or accidental and could also be categorised as Natural radiation pollution and manmade radiation pollution. Continuous radioactive pollution occurs where radiation pollution happens at a constant rate, for example, uranium mines, nuclear reactors, and test laboratories where there is radiation present on a daily basis. Occasional radioactive pollution arises during nuclear tests or during experimental trials on radioactive ingredients which could happen one to five times a year. Accidental radioactive pollution takes place when certain tests involving hazardous substances fail, example explosions (Richard, 2013).

Natural radioactive pollution is where the environment is polluted with radiation created by nature itself. There are two types of Natural radiation which are Cosmic rays and Terrestrial Radiation. Radiation which rain constantly upon, the Earth is known as cosmic rays. The possible source of cosmic rays is from the countless number of stars in the Universe. Evidence for this is the amplified cosmic ray force observed on Earth following solar flares. Nevertheless, it is clear that the sun is not usually the main provider to the total cosmic change since hours of daylight variations are very small. Terrestrial radiation is electromagnetic radiation in the form of heat produced by Earth as it cools down at night, especially when the air is dry and there are no clouds.

Man-made radioactive pollution is where the environment is polluted with Radiation due to the use of modern technology. There are four main types of artificial radioactive pollution which are the medical source, industrial source, nuclear power and nuclear explosions. This is one case where a Russian nuclear power plant on Kayak in 1957 where an explosion released 100 tons of radioactive waste to the atmosphere as stated by DARA (2009). The medical source is where radiations are active for pinpointing and healing tenders. X-rays are used in general radiology

and CT scan. Gamma rays are used in the cure of cancer. In all these events we are open to large amounts of radiations. The industrial source is where radioactive matter is much more commonly used in the industry that is normally known and represents a significant element in the man-made radiation environment. Nuclear explorations are a serious source of radiations death trap. The properties of thermonuclear detonations in Nagasaki and Hiroshima are quite unforgettable. Nuclear tests are particularly a threat when they are carried out in open environment as it is a key reason for radiation pollution; it is accountable for increasing radiation levels all over the world. This radioactive ash gets launched into the air at an altitude of 6 to 7 km exceeding the earth‘s surface and it spreads over extensive distances by winds from the trial site (also recognized as radioactive fallout). This has mainly occurred during the cold war including over 65,000 nuclear warheads in United States alone and nearly 20% of them were used on the first year after the war started (Taylor, 1996).

Ever since radiation was discovered, more extensive research on radiation has revealed evidence on the carbon-based mechanisms by which radiation could affect the health of living beings. Three types of health effects are present: They are early health effects, delayed health effects and other health effects. Early health effects are triggered by extensive cell loss/damage example skin burns, loss of hair and impairment of fertility. These health effects are described by a rather high concentration of radiation over a short period (Richard, 2013). Delayed health effects arise after an extended period of time of exposure towards radiation. Commonly, most delayed health effects occur depending on the contamination quantity received. These health effects are caused by alterations in the genetic material of a cell after exposure to radiation. High radiation doses to the heart may grow the possibility of cardiovascular also known as heart attacks. Such exposure may occur during radiotherapy; even though treatment methods today result in lower radiation doses (Anderson, 1975).

The most common methods to safeguard yourself from radiation is to remove all clothing when contaminated, find a safe shelter away from the contaminated area (Hasegawa, 2015 and wash-down all of the exposed areas of your body with a lot of soap and warm water to remove contamination as quickly as possible, this practice is known as decontamination. This is to prevent spreading contamination onto other areas of the body and go through medical check to ensure that there are no health risks (International Atomic Energy Agency, 2005). There are also natural ways to be protected from radiation. These are some simple methods for everyone to reduce exposure to radiation; introduce more chlorophyll-rich foods into your diet, such as seaweed, kelp, blue-green algae, spirulina, and chlorella. These plants contain rich minerals, including iodine, that bind up the receptors site in your thyroid so that any radioactive iodine that you end up being exposed to will be unable to harm your thyroid. These foods also contain potent antioxidants, like selenium, that prevent destructive free radical activity and cancerous growth, as well as chelating agents that bind to toxins and eliminate them from your body. Eat antioxidant-rich foods of every color, especially cherries, blueberries, pomegranates, yams, and sweet potatoes. The varieties of antioxidants found in these foods help your body to mop up free radicals and toxins. Drink six to eight 8-ounce glasses of filtered water every day to flush and hydrate your system. Consider taking vitamin C, E, and D to assist antioxidant actions within your body. Also, alpha lipoic acid is a nutrient that protects cells from radiation damage. Herbs like dandelion, peppermint, and chrysanthemum help the body detoxify. Undergoing a medically supervised detox program like the Tao of Wellness Detox Retreat can support your body’s cleansing function. 5 CONCLUSION In summary one can be exposed to radiation both naturally and through various activities carried out by humans. It can be seen that overexposure to radiation can cause damage both immediately and also later on in life. The above information

reveals about various types of radiation, its effects and also methods of preventing such phenomenon to create awareness among the community about the harmfulness of radioactive pollution. Due to the time constraint, the research has merely scratched the surface of the dangers that of radioactive pollution poses. Statistics and figures used above may vary in some research. In conclusion, it can be seen that although we are not able to halt the ill effects of radioactive pollution or the exposure of it in general, we can still be able to minimize the harmful effect to both the environment and humans if we take the necessary precautions against man-made radioactive pollution.