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Environmental Assessment Impact of Agbara Industrial Estate: A Review

This review gives insights into the levels of naturally occurring radionuclides (NOR), radioactive particles of air dust, heavy metals, environmental pollution and related hazards at Agbara industrial Estate, Agbara, Ogun State, Nigeria. Due to many industries located in Agbara industrial estates, there is much discharge of gaseous effluent, waste disposal. Industrial air dust harbours several pollutants, including heavy metals. The varying particle-size distribution of this dust and its large surface area makes it easier for the deposition and transport of heavy metals. The most used equipment for determination of radionuclide concentration is gamma-ray spectrometry with NaI (Tl) detector. Also, there are various methods used for the sampling of environmental pollution in dust and for heavy-metal determination which include: Andersen sampler filter and atomic absorption spectroscopy (AAS), inductively coupled plasma-mass spectrometry (ICP-MS), among others, respectively. Studies have shown that the pollutants in industrial areas are mainly derived from industrial activities but not a predominant source of pollution. Risk-assessment studies have shown that metals in urban dust could cause such problems as human pulmonary toxicity and reduction of invertebrate populations. The risk levels seem to be higher in children than adults, as some studies have shown. It is therefore important that scattered studies on heavy metals, pollution and radioactivity levels in a particular location should always incorporate risk assessment as one of the main issues and are put together in order to know what has been done and to detect research gaps.

Keywords: Radionuclides; heavy metals; pollution; industrial activities; risk assessment; toxicity; human health

Primary author: AKINPELU, Akinwumi (Department of Physics, Covenant University, Ota, Ogun State, Nigeria)

Co-author: USIKALU, Mojisola Rachael (Covenant University)

Presenter: AKINPELU, Akinwumi (Department of Physics, Covenant University, Ota, Ogun State, Nigeria)

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