

Development of environmental warfare ammunition by using mining waste, oil and gas waste

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ABSTRACT

Environmental warfare agents are Chemical weapons made of a chemical substance by using different natural processes such as hydrological cycles and rock cycles to release them on the battlefield. That reacts with the human body, causing death at a very small concentration in a very fast reaction rate. All industrial sectors, such as the oil and gas sector and mining industries, produce huge amounts of toxic chemical waste. These chemical wastes are promoted as raw materials for the development of environmental warfare agents.

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Keywords: Nuclear weapons; chemical warfare; organophosphorus insecticides; chemical agents.

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INTRODUCTION:

Every year, the mining industry is produced more than 100 billion tons of waste. And 2.01 billion tons of waste from the oil and gas industry. This waste has different types, such as liquid waste, semi-liquid rubbish, solid rubbish, chemical waste, spent catalysts, and emissions [9,10]. The wastes from mines, oil fields and gas fields are enrichment from different types of toxic elements and compounds. Providing opportunity to use this waste for design and development, environmental warfare ammunition. The wastes are generated in mines due to the extraction and processing of minerals. The first stage is the removal of ore from the earth's crust by the blasting process or liquid extraction, such as in some uranium mines. Some contents of wastes such as arsenic, barite, calcite, cyanide, fluorite, hydrogen sulfide, mercury, pyrite and quartz. The contents, such as arsenic, cyanide, fluorite, hydrogen sulfide, and mercury, are very toxic [11-13]. These toxics are convertible to chemical warfare agents by using different chemical processes. Chemical warfare agents, which are to be solid, liquid or gas, are used as environmental warfare ammunition. In the O&G sector, there different waste streams are contaminated by oily or hazardous fluids, and radioactivity requires careful handling [14,15]. In the gold mines, there are wastewater streams that are contaminated by arsenic. Environmental warfare ammunition is designed to spreading the environmental warfare agents over the target area. Environmental warfare agents are classified based on their physical state: Solid, liquid and gas. Designing environmental warfare ammunition by using solid-state arsenic, uranium and other heavy and lethal elements. For ammunition, it is used in solid arsenic salts or lead salts or uranium salts powders as agents for making groundwater toxic or surface water by using a cluster bomb. , this bomb distributed the agent in a uniform way over the targeted area. Using solid waste, wastewater, waste gas from oil fields, and liquids from mines and oil gas fields as raw materials for producing high-quality and lethal ammunition is provided a good opportunity and very promoted. Development of environmental warfare agents and using this agent to produce environmental

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warfare bombs such as depleted uranium is used by the US Army in certain types of ammunition.



fig.1 US army depleted uranium ammunition

These raw materials are treated by physical and chemical processes to the required concentration and enrichment of effective compounds. These raw materials are reached to the required lethal level. Mining operations are generated waste rock, these wastes essentially contain the minerals associated with both the ore and host rock. Wastes are generated acid due to mining operations with mined materials by leaching processes and rock units. The oil and gas production process produces a huge amount of waste, such as debris, lubricating oil contaminated soil from drilling, and natural gas contamination by hydrogen sulfide, which is a potential environmental gas warfare agent if used at very high concentration and also as raw materials for production other chemical warfare agents. In the production of gold ores from mines, two chemical toxic agents are used. There are Hg compounds and cyanides. These two toxic chemicals are very promoted raw materials for producing environmental warfare agents.



Fig.2 US army chemical ammunition

DISCUSSION

Environmental warfare ammunition are produced at very low-cost due to using mines waste and oil fields waste. Using different types of processes for purification, separation, concentration, and enrichment for the development of environmental warfare agents and filling inside cluster bomb casings. Depending on the types of agents and physical state of agents. Environmental warfare agents are defined as toxic chemicals' that interacted with the hydrological cycle and rock cycle to poisons enemy troops and enemy manpower. Toxic chemicals are reacted with the human body due to exposure by inhalation, ingestion and through dermal skin contact. , that chemicals cause death and a high lethal rate. An environmental warfare agent is a chemical that interacts with the hydrological cycle to cause high lethal rate in enemy troops.

Environmental warfare agents are a Chemical weapon as toxic chemicals and prohibited under chemical weapons Convention Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals. Introducing through natural processes to cause death due to internal biochemical reactions between chemical warfare agents and different systems in the human body. Chemical agents are introduced to life in Earth's ecosystem, wildlife and plants. These environmental warfare agents are introduced through natural resources such as soil, water and air and also through plants. The concentration of environmental warfare agents in the releasing area must be lethal concentration to producing target lethal rate.

CONCLUSIONS

- Different kinds of industrial sectors, such as the oil and gas sector and mining industries, produce huge amounts of toxic chemical waste. These chemicals wastes are promoted raw materials for development environmental warfare agent and different types of clusters bomb for releasing.

- environmental warfare agents are special type from A chemical warfare agents are made of a chemical substance that releasing by hydrological cycle ,rock cycle and other natural physcs processe,chemical processes.then the human body is exposed through soil,water and air , causing death at a very small concentration in a very fast reaction rate in less than one minute of exposure.

DISCLAIMER

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript

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