

International Conference on the Management of Naturally Occurring Radioactive Materials (NORM) in Industry

VIRTUAL EVENT

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DEVELOPMENT OF NATURAL RADIOACTIVITY MONITORING PROGRAMME IN GHANA.

Naturally Occurring Radioactive Materials (NORM) monitoring in Ghana started effectively in the early 2000 at the Radiation Protection Institute of Ghana Atomic Energy Commission (RPI, GAEC) currently actively working on NORM monitoring including radon in dwellings and workplaces such as mining, oil and gas, rock quarries and other extractive industries. Industrial activities and mining operations have been carried out in Ghana for over 100 years with very little knowledge about the radiological aspects of these activities. The focus has always been on the use of artificial sources for process control and research. In many developing countries including Ghana, activities leading to the exposure to NORM and release of radon and other decay products into the environment as a result of operations from Oil and Gas and gold mining especially radon gas from underground activities have not been extensively investigated and subjected to regulatory control. At the present time, Ghana does not have national guidelines specifying the acceptable limit of environmental radioactivity in practices leading to NORM exposure but have been using international action levels and limits. As a result, there is general lack of knowledge and awareness of the radiological hazards by the public including legislators, regulators, operators and decision makers. NORM and Radon in mining, rock quarries and mineral processing covering all the major mines in the country will be studied. NORM exposure levels associated with wastes and residues from oil and gas will also be determined. The objective of this paper is to describe five years national NORM programme in gold mining, Oil and Gas, rock quarries and other workplaces, challenges and the Way forward. The study will highlights the Nuclear Regulatory Authority (NRA), Act 895 of 2015 for NORM monitoring. The paper will also give overview description of the appropriate sampling and methodologies, availability of an appropriate equipment as well as the laboratory infrastructure at the RPI, GAEC. The result from the study will be useful in developing guidelines for radiation protection policies for decision making as well as strategies for sustainable development with emphasis on the combined effects of radioactivity in the environment, mining, Oil and Gas, rock quarries and other workplaces in Ghana.

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