VIRTUAL EVENT
International Conference on
Management of Naturally Occurring Radioactive Material (NORM) in Industry
19–30 October 2020 #NORM2020

Contribution ID: **256** Type: **not specified**

Detection and Evaluation of NORM in Gas Liquid Process Plants

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Detection Measurement and Interpretation of radiation exposure and surface contamination measurements on operating gas liquid plants to identify equipment containing regulated NORM material. Recent surveys of a gas liquids plant found dose rates and contamination readings on equipment indicating the presence of NORM regulated in the State of Texas USA. External dose rates above 12 micro Sieverts per hour indicate potentially concentrated NORM solids deposited within the equipment. Bremstrahlung X rays may indicate large volumes of highly concentrated NORM deposited from the gas liquid process. Equipment with high external dose rates will be sampled and analyzed to evaluate the radioisotopes present and explain the high dose rates. NORM maintenance worker total effective dose equivalent exposure will be reported. The data from the paper will show that radiological survey and respiratory air monitoring programs together with related NORM waste sample analysis results are required for operating gas liquid process plants from the early days after commissioning.

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Session Classification: Session IV - Characterization in Industrial Facilities and in the Environment

Track Classification: NORM Characterization, Measurement, Decontamination