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



Contribution ID: 181

Type: Poster

Phosphogypsum management in Tunisia

Processing of phosphate rock concentrates the naturally occurring radioactive material (NORM) in the phosphate rocks to a degree that they may pose risks to humans and the environment. The concentration of radionuclides such as uranium (U) and/or thorium (Th) series and their respective decay products during phosphate rock processing results in technically enhanced –naturally occurring radioactive material (TE-NORM) in form of phosphogypsum. The majority of radionuclides in TE-NORM are found in the U-238 and Th-232 decay series. Phosphogypsum produced worldwide is a challenge for the producing countries and fertilizer companies alike. The accumulation of phosphogypsum (PG) produced till 2015 makes its management a real challenge to the Tunisian authorities and phosphate processing companies. Tunisia has a long history of phosphogpypsum management that is reviewed in this work. In addition, techniques used to successfully process phosphogypsum are presented and a future outlook is provided.

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Session Classification: Session VI - Solutions for Residue and Waste Management

Track Classification: NORM Residue and Waste Management