

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

VIRTUAL EVENT

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RADIOLOGICAL IMPACT STUDY FROM A SITE OF A FORMER DICALCIUM PHOSPHATE PRODUCTION PLANT

OBJECTIVE

This paper describes the studies performed regarding a particular terrain in Spain in which stacks of naturally occurring radioactive material (NORM) is stored, with the objective of proposing a suitable solution for the management of that piece of land. The NORM resulted from a former dicalcium phosphate production plant that used to be located in this site.

WORK PERFORMED

The study consisted covered the:

- Radiological characterization of the terrain, identifying the radionuclides that are present and their concentrations in different areas of the site.
- Evaluation with a simulation code of the current radiological impact to the surrounding population and that of potential future workers in the site considering a series of remediation actions.
- Proposal of actions based on the estimates obtained Study of the potential radiological impact on the surrounding population and the workers during the remediation works of the site.

The performed studies are on the process of consensus between the different stakeholders, having been presented to the local Authorities, Universities and the Regulator.

CONCLUSIONS

Under the considered scenarios and hypothesis, from the radiological impact assessments performed and based on the obtained results it could be concluded that the presence of phosphogypsum (NORM wastes) in the site does not suppose a significative radiological impact for the current population from the radiation protection standpoint.

Furthermore the proposal of solution, holding the hypothesis used and as long as the structural integrity of the remediation solution are kept in time, allows for the reuse of the site constrained to an industrial use, without posing a significant risk the workers of the remediated site from the radiation protection standpoint.

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