

REUSE OF NORM MATERIALS

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Abstract

Due to the decreasing quality of waste that is processed on landfills in The Netherlands, there is a lack of stable material which is needed for the landfill exploitation (building paths, slopes, etc.). Where these essential aspects can't be realised by using existing waste materials, we decided to make them ourselves in order to avoid using primary materials. With an immobilisation plant on site we are able to create our own building materials from waste, such as residues of soilwashing.

The landfill is also permitted for the dispose of lower radioactive NORM-materials, so the location is accustomed to handling NORM. From different points of view, responsibly using NORM-materials on this particular landfill is an option.

The immobilisation process is quite a basic and proven technology. The innovation is using NORM-material as a stabilizer, for which normally the primary material lime is used. Just one parameter in the existing process is different, which makes it easy to apply. The fact that the primary process is well known, allows keeping focus on the secondary and most important process: handling the NORM-material with care.

In the presentation we will address both the general approach (technology, permits and practical issues) as well as a case study on a recent full scale application: where a 40 ft. container filled with NORM zircon sand was a big problem for a trader in de Harbour of Rotterdam, by using our new technology/application combination, we succeeded in offering an appropriate solution using proven technologies.

Where the trader focused on the radiation problem, the key to a solution lay in keeping focus on the fact that still the zircon sand was a usable material. It can easily be applied in a useful way as a stabilization material in our process of immobilisation.

After several projects, this activity is scaled up from pilot phase to a new business line of Van Gansewinkel Maasvlakte. In the meanwhile this technology has proven itself for NORM slag wool, NORM sludges from the gas exploring and production industry (off shore) and NORM residues of vacuum distillation.