Contribution ID: **213** Type: **Poster**

NORM management at the former Prydniprovsky Chemical Plant in Ukraine

The Prydniprovsky Chemical Plant (PChP) was one of the largest uranium ore processing plants in Europe operating from 1948-1992. In total at this site and at the other surrounding areas about 120 million tons of mine tailings, including residues from uranium extraction and remaining ore materials are accumulated. The 120 million tons of tailing materials can roughly be characterized into: (1) 72 million tons of waste rock piles from iron containing ore and other not clearly accounted for tailings as well as stacks of uranium containing ore and soil, (2) 40 million tons of tailings from uranium ore processing, that include also (3) 6 million tons of phosphogypsum stakes (non-radioactive) used to cover the uranium residues tailings. Besides the aforementioned materials, relevant amounts of low-radioactive waste water of atmospheric origin is present at the site in basements of the former uranium-extraction facilities. The waste water needs to be processed on site before it can be released into the environment. This work provides an overview of the management practices of naturally occurring radioactive material (NORM) at the Pridneprovsky Chemical Plant and also brings the suggestions concerning possible pathways for processing the present mine tailings. This analysis includes implications and limitations of principles of circular economy (e.g., legal and technological aspects) and the need for future-oriented interventions based on comprehensive system innovations aimed at sustainable development.

Primary authors: VOITSEKHOVYCH, Oleg; LAVROVA, Tetyana; KORYCHENSKY, Kirill; SATALKINA, Liliya; HANEKLAUS, Nils; STEINER, Gerald

Presenter: VOITSEKHOVYCH, Oleg

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

Track Classification: NORM Residue and Waste Management