Contribution ID: **187** Type: **Poster**

Management of accumulated water in different open pit in Sierra Pintada uranium mine, Mendoza, Argentina.

The Sierra Pintada uranium mine operated for 23 years, during which developed the mining and treatment of uranium ore in order to obtain uranium concentrate or yellow cake (ammonium diuranate) as a final product. The production stopped in 1997 for economic reasons, having extracted only 20% of the ore reserves. During these years of operation, environmental liabilities were generated and placed on transitional basis until their final management, understanding them as wastes (solid and liquid) of the operations and the modifications of the topography and hydrography of the area because of the mining.
In 2019, the CNEA obtained the Environmental Impact Assessment for the Phase I of the Environmental Liabilities Management in the CMFSR. It focuses on the remediation of liabilities with priority and provides:
1- Treatment of water stayed in the open pits.
2- Treatment of solid wastes stored in drums proceeded from the refining of yellow cake and conversion to UO2.
In a first phase of remediation the quarry water waste and solid waste will be treated. This work will describe the processes planned for the management of the water contained in the different open pits that were generated during the operational stage of the Complex.
Treatment of water stayed in the open pits
In the quarries, where there are still mineralized rocks, the rainwater and groundwater are accumulated and several elements have been raised. During the operation, it was used as process water and since the discontinuation of activities, it has been accumulating in these cavities.
The chemical elements present in the quarry water that are above the permitted levels are uranium, radium and arsenic. In a first stage the uranium will be extracted through the use of ion exchange resins and in a second stage the radium and arsenic will be extracted by precipitation through the addition of chemical compounds. The treated water will be disposed in an irrigation area within the facilities of the Complex.

Author: Mr DIEGUEZ, Sergio (National Atomic Energy Commission)

Presenter: Mr DIEGUEZ, Sergio (National Atomic Energy Commission)

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

Track Classification: NORM Residue and Waste Management