

NATIONAL RADWASTE REPOSITORY



SK00K0378

MOCHOVCE

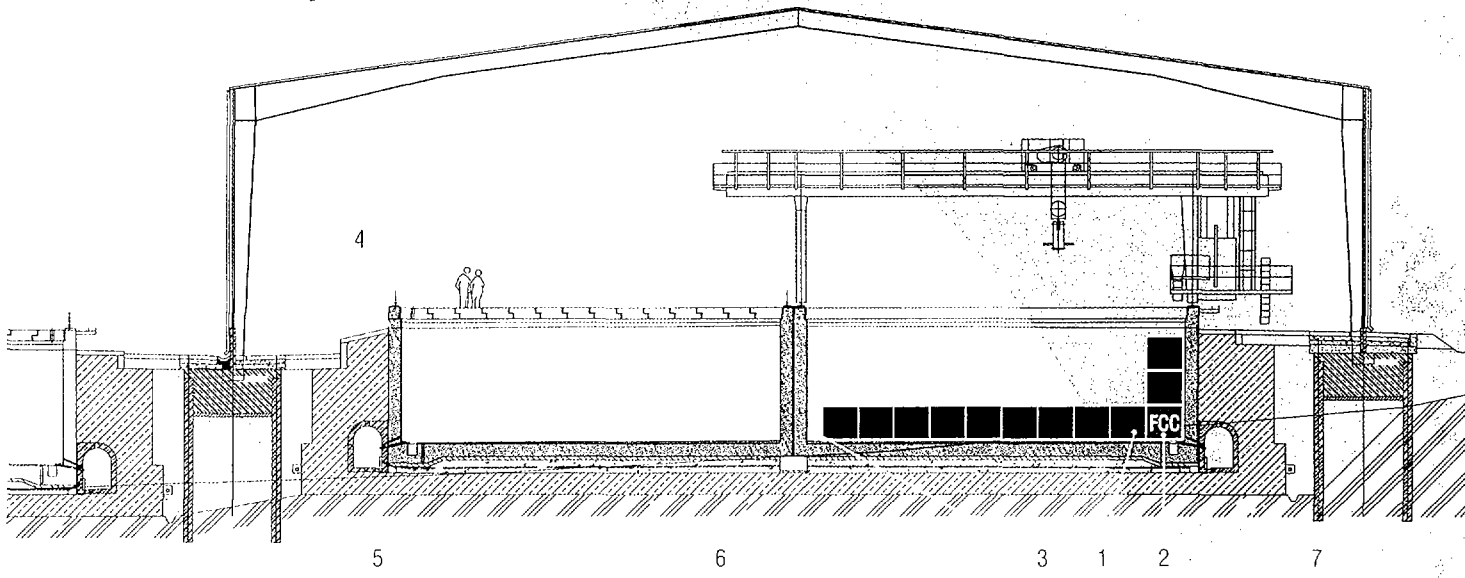
DECOMMISSIONING OF THE NUCLEAR INSTALLATION
RADIOACTIVE WASTE AND SPENT FUEL MANAGEMENT
JASLOVSKÉ BOHUNICE



SLOVENSKÉ
ELEKTRÁRNE

1 9 7 0 9

Protection Barriers System



CROSS-SECTION OF THE REPOSITORY

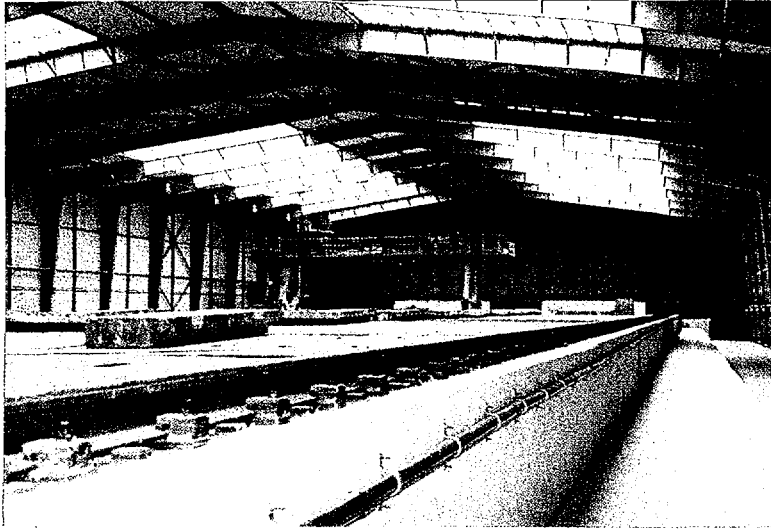
- 1 Matrix
- 2 Fibre concrete container /FCC/
- 3 Filling of Interspace
- 4 Reinforced concrete construction of storage boxes
- 5 Drainage layer
- 6 Clay seal
- 7 Geological formation



VIEW ON THE COVERAGE HALL OF REPOSITORY

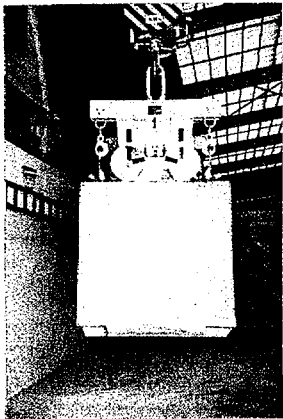
National Radwaste Repository - Protection Barriers System

The Mochovce National Radwaste Repository (Repository) is a surface multi-barrier type storage facility for solid and treated solidified radwaste generated from the Slovak Republic nuclear power plants operation and decommissioning, research institutes, laboratories and hospitals.

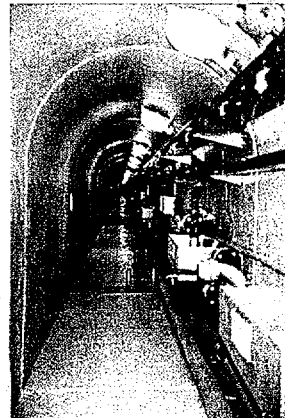


DISPOSAL VAULTS

The Repository comprises a system of single- and double-row storage boxes. The first double row is enclosed by a steel structure building. The 18x6x5,5 m storage boxes are made of reinforced concrete. The wall thickness is 600 mm. Two double-rows, i.e. 80 storage boxes were built as part of Stage I (1 row = 20 storage boxes). Each storage box has a storage capacity of 90 fibre reinforced concrete containers of 31 m³ volume. The total storage capacity is 7 200 containers with the overall storage volume of 22 320 m³.



FIBRE REINFORCED CONCRETE
CONTAINER EMPLACEMENT



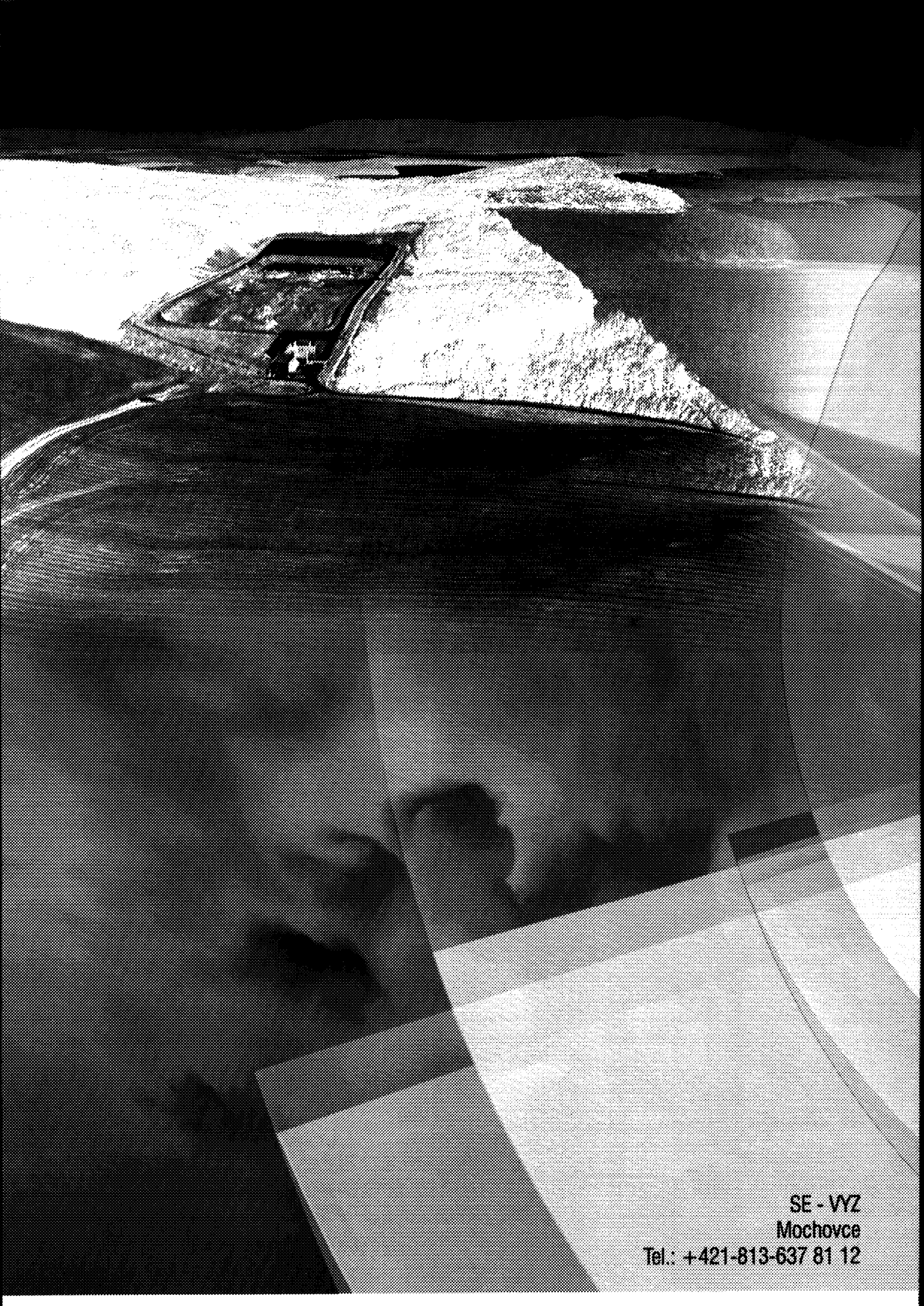
MONITORING TUNNEL

All vital parameters of the Mochovce National Radwaste Repository are consistently monitored to collect evidence of a safe environmental separation of the radwaste during its storage process and after the facility seal-off. The Repository monitoring system should provide information essential for evaluation and assessment of its safety during and after the Repository operation. The monitored components, monitoring and sampling sites and sampling frequency were determined in virtue of an analysis carried out for a contingent active release. The monitoring tasks extend over three periods: pre-operational, operational and post-operational.

It is important to identify the monitored parameters, monitoring frequency and monitoring sites to obtain meaningful and statistically correct monitoring results.

These concerns are reflected in the "Repository Monitoring Project", comprising 9 parts: monitoring of drain water, underground water and surface water, soil, food chain, clay basin humidity, repository area erosion effects, reinforced concrete structures of the facility, and repository load impacts.

The basic safety requirement of the Repository is to avoid a radioactive release during its operation and institutional inspection. This commitment is covered by the protection barrier system. The method of solution designed and implemented at the Repository extension complies with the latest knowledge and practice of the repository developments all over the world and meets requirements for the safe radwaste storage with minimum environmental consequences.



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