INTERIM REPORT ON THE SETTLEMENT TEST IN STRIPA

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A deposition hole, of the KBS 3 concept type, is being simulated by a borehole with 40 cm diameter in the Stripa mine. The canister is heated and different vertical loads applied to the canister. The resulting canister displacement, rock displacements and swelling and compression of the compacted bentonite and sand/bentonite overfill are studied.

The test is still running. So far the results and calculations have yielded the following main conclusions:

1. The canister is heaving since the compacted bentonite is swelling upwards, thereby compacting the overlying sand/bentonite overfill.

2. The effect of a temperature increase on the surrounding rock can only be explained by block movements. The very high pore pressure induced in heated bentonite is strongly affecting the rock.

3. The total consolidation settlement caused by the weight of the canister is several times larger than the total creep settlement achieved in the initial 100-1 000 years.

4. The processes observed during the test are fairly well understood and seems to be predictable.

The report ends up with a suggestion of how to continue and finish the test, and with a prediction of the result of an increased canister load at the present high temperature.