|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Variable influence on process** | | | **Process influence on variables** | | |
| **Influence present? (Yes/No Description)** | **Time period/Climate domain** | **Handling of influence (How/If not - Why)** | **Influence present? (Yes/No Description)** | **Time period/Climate domain** | **Handling of influence (How/If not - Why)** |
| Temperature in bedrock | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Influence neglected; little significance compared with other influences. | Glacial | Influence neglected; little significance compared with other influences. |
| Groundwater flow | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Groundwater pressure | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Influence neglected; little significance compared with other influences. | Glacial |
| Gas phase flow | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Repository geometry | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Fracture geometry | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Porosity included in the modelling of the consumption of O2 in infiltrating glacial meltwaters. | Glacial | Influence neglected; little significance compared with other influences. |
| Rock stresses | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Matrix minerals | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Included in the modelling of the consumption in the rock matrix of O2 infiltrating in glacial melt waters. | Glacial | Included in the modelling of the consumption in the rock matrix of O2 infiltrating in glacial melt waters. |
| Fracture minerals | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Groundwater composition | Yes | Excavation/operation | The effects on dissolution-precipitation reactions in the rock matrix induced by the propagation of changes in chemical composition of groundwaters in fractures are not considered. Observations of drillcores indicate that this influence is negligible. | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Included in the modelling of the consumption in the rock matrix of O2 infiltrating in glacial melt waters. | Glacial | Included in the modelling of the consumption in the rock matrix of O2 infiltrating in glacial melt waters. |
| Gas composition | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Structural and stray materials | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Saturation | Yes | Excavation/operation | Process neglected; little expected impact compared with the effects of reactions with fracture-filling minerals. | Yes | Excavation/operation | Disregarded: Too small amounts of gaseous species involved in water-rock reactions. |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Saturated conditions assumed. | Glacial |