|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **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)** |
| Radiation intensity | No | Intact canister |  | Yes The radiation intensity is a result of radioactive decay. | Intact canister | The radiation intensity as a function of time is calculated from the radioactive decay of the inventory of radionuclides (see the Spent fuel report, SKB TR-10-13). |
| Failed canister | Failed canister |  |
| Temperature | No | Intact canister |  | Yes Most of the decay energy is transformed into heat. | Intact canister | The heat generation (and the temperature in the fuel) is calculated as a function of time from the radioactive decay of the inventory of radionuclides. |
| Failed canister | Failed canister |  |
| Hydrovariables (pressure and flow) | No | Intact canister |  | No But indirectly through radiolysis. | Intact canister |  |
| Failed canister | Failed canister |
| Fuel geometry | No | Intact canister |  | No | Intact canister |  |
| Failed canister | Failed canister |
| Mechanical stresses | No | Intact canister |  | No | Intact canister |  |
| Failed canister | Failed canister |
| Radionuclide inventory | Yes This is the source of the process. | Intact canister | Obvious. | Yes The process both consumes and produces radionuclides. | Intact canister | The radionuclide inventory is calculated as a function of time. |
| Failed canister |  | Failed canister |  |
| Material composition | No | Intact canister |  | No | Intact canister |  |
| Failed canister | Failed canister |
| Water composition | No | Intact canister |  | Yes Negligible compared to other processes influencing the water composition. | Intact canister |  |
| Failed canister | Failed canister |
| Gas composition | No | Intact canister |  | Yes Negligible compared to other processes influencing the gas composition. | Intact canister |  |
| Failed canister | Failed canister |