

From: Kim, Duck (EC)

Sent: February 21, 2019 10:22 AM

To: Obreja, Catalin (EC)

Subject: Are you in today? - CNSC REGDOC 1.2.1 - couple of comments for you to review

Hey Catalin,

I've commented on flooding and extreme climatic/meteorological events that may affect a deep geologic repository (during the operational phase mainly) – I was hoping you could take a quick look at it to ensure that I'm not saying anything I shouldn't. I've attached the actual proposed draft regdoc in question for your convenience. Here are the comments:

Section 3.2.1 Climate – We suggest adding the word rare in association with extreme in the section where appropriate. Typically extreme meteorological events are also rare events and statistically the rare extreme events are distinct from extreme events that are not rare.

Section 3.2.1 Climate – The meteorological data that needs to be collected to inform a model to adequately predict extreme and rare precipitation events needs to consider maximum probable precipitation demonstrated with IDF (intensity, duration frequency) statistics including an extreme value analysis to ensure extreme rare events are not missed.

My addition/modification:

“for data base much shorter than the lifetime of the project, in addition to IDF calculations, methods based on Extreme Value Theory should also be employed”

Section 3.2.3 Topography, hydrology and Flooding – the bullet referring to the magnitude and frequency of floods in the region, should either include the word “extreme” or else add another bullet in this list to add “magnitude and frequency of extreme meteorological related events such as rainfall, flooding and severe wind”

My suggestion: ““regional and local precipitation characteristics (precipitation and snow), including extreme events”