

Interactive comment on “Risk assessment and management for an extreme accident at a waste slag site” by Shuang Liu et al.

Shuang Liu et al.

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Thanks for the comments. That's very helpful. We have greatly revised and improved the article, added some missing parts and illustrated the diagrams and tables more precisely.

1, Comment “its content alternates back and forth between sections describing the features of the proposed procedure and sections illustrating the case study” Response: The article has already been restructured and separated the risk assessment steps and the case. We adjusted the order of parts of the content. The second and third parts mainly introduce the evaluation steps and the specific methods and operating procedures. The fourth part introduces the application of the specific case.

C1

2, Comment “the role played by the different stakeholders does not clearly emerge from the . More details are needed on this central aspect of the proposed procedure.” Response and changes in the manuscript: About the roles of different participants in the second part of the STEP 4, we introduce it and used to determine the upper and lower limits of the curve of tolerance risk and tolerable risk, as well as the supervision and supervision responsibility of each participant after the subsequent closure.

3, Comment “The originality of the overall procedure is not clear, as the key innovative elements proposed are not properly highlighted” and “clearly define if they have an essential role in the procedure or if they are only used to apply the procedure to the case study.” Response and changes in the manuscript: The method of each step has been written in detail in the second part of each method below. The method described in process of each step is for the evaluation. The method in the third and fourth part is the method for the case.

4, Comment “Figure 2 should be restructured to better highlight the phases of the procedure described in the text.” Response: The order of the left in Figure 2 is the general risk assessment process, the right is the extreme event of the risk assessment process, that is, in the case of failure to determine the failure probability of the risk analysis. It is used to distinguish between two different types of evaluation processes.

5, Comment “The results of the procedure applied to the case study must be described following the different phases of the procedure, as they are presented in Figure 2.” Response and changes in the manuscript: After reconstruct the structure of the thesis, the third part and the fourth part of the paper are divided into two parts of risk evaluation and management, which is consistent with the order of the right evaluation six steps in Figure 2.

6, Comment “The role of the laboratory experiment must be better explained.” Response and changes in the manuscript: In the third part of the risk assessment process, experimental groups and the different characteristics of each group are added.

C2

More details about the experiment are given in the manuscript.

7, Comment "It is too long and not well balanced in terms of topics addressed." Response and changes in the manuscript: The introduction part simplifies lots of the content, strengthen the relationship with the theme of the article.

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C3