

Interactive comment on “Mineral leaching chemicals transport with runoff and sediment from severely eroded rare earth tailings in southern China” by Huizhong Lu et al.

Anonymous Referee #2

Received and published: 10 April 2017

The manuscript is good to be published for journal readers but the author didn't follow journal guidelines while preparing the manuscript and there are numbers of language corrections to be made. A few things struck me as I went through the article:

1-The title, keywords and running title are all present and appropriate. Abstract In general, the abstract is appropriately organized and contains 200 words. At present, the abstract states the nature of the research but not its significance. Please list methods, main findings, etc. 2-Introduction The introduction given is relatively brief but does offer a good introduction to rare earth tailings. * It would be useful to present some information about the rare earth elements, this should be stated as part of the rationale/objectives at the end of the introduction. * At the end of the introduction, it

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would be helpful to offer a brief, clear statement of the objective of this review. Such a statement would provide a transition to the main ideas being presented. Experimental methodology Experimental methodology is fine Results Results section is fine. Tables and figures The figures are a potentially useful addition to the paper and demonstrate important ideas that the author is presenting. The figures are generally of good quality and easy to read. However, additional explanation in the text would help the reader understand the figures better. * In general, each figure is not presently referred to in the main text. In my view, this limits their usefulness to the reader. The figures should help the reader understand the main arguments of the author and, as such, should be introduced in the main text. * The titles to the figures could be more descriptive and should include definitions for terms or phrases used in the figure itself. Discussion Although no specific "Discussion" section is presented, I will include comments here on the main body of the text of the paper. * The main body of text is relatively concise given the wide range of topics covered. However, the text is somewhat disjointed and disorganized. The use of headings for sections and sub-sections is not clear and leads to confusion. The various sections of the main body of text do not seem to flow very smoothly. Please consider the overall structure of the paper to ensure that similar sections. * Additionally, please consider defining any technical terms used in the section headings. Conclusions As it stands, the conclusion is quite brief. This section could be improved to better reflect the large amount of information reviewed in relation to the title/objective of the paper. In my view, the conclusions should be expanded to better summarize the overall "feel" of the main review section to give the reader a strong take home message. References Some of the references are outdated; I suggest the following references should be cited in the manuscript. 1)Chemical speciation and bioavailability of rare earth elements in the ecosystem: a review (2016). Environmental Science and Pollution Research DOI: 10.1007/s11356-016-7427-1 2)Cumulative impacts of dissolved ionic metals on the chemical characteristics of river water affected by alkaline mine drainage from the Kuala Lipis gold mine, Pahang, Malaysia (2014) Chemistry and Ecology. 13 (1): 22-33. DOI:10.1080/02757540.2014.950569 3) His-

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torical variations of Bera Lake (Malaysia) sediments geochemistry using radioisotopes and sediment quality indices (2013) *Journal of Radioanalytical and Nuclear Chemistry*, 295(3): 1715-1730, DOI: 10.1007/s10967-012-2270-4

Interactive comment on *Solid Earth Discuss.*, doi:10.5194/se-2017-28, 2017.