Response Statement to Referee's Comments (RC1)

Wang and Jeng

January 24, 2026

The authors thank the reviewer for the valuable comments. The manuscript has been revised by carefully considering all the comments. The changes are highlighted in the marked copy, and detailed responses to the reviewer's comments are provided below.

Comment #RC1:

E.g. validation : Line 280 - information regarding mesh, parameters, boundary conditions and similar are not reported. This circmstance makes the reproducibility of the results a major concern.

Response:

We thank the reviewer for highlighting this important issue regarding reproducibility. We acknowledge that essential numerical information was insufficiently reported in the previous version, which could hinder the reproducibility of the results.

To address this concern, a new subsection entitled *"Numerical stability"* has been added to the manuscript. This subsection provides detailed information on the adopted mesh characteristics, time-step sizes for both the hydro-mechanical and chemical processes, solver configuration, convergence tolerances, and the sensitivity of the numerical solution to these numerical settings.

In addition, the boundary and initial conditions, together with the key material parameters used in the validation cases, are now explicitly reported in Section 4.2. With these additions, the numerical setup required to reproduce the presented results is now documented in sufficient detail in the revised manuscript.