Preparation of QA/QC protocol for environmental CCS management: Selecting the pertinent analytical methods

HYUN A LEE[1*], JOO AE KIM[1] AND HYE-ON YOON[1*]

[1]Seoul Center, Korea Basic Science Institute, 6-7, Inchon-ro 22-gil, Seongbuk-gu, Seoul 136-075, Republic of Korea (*correspondence: dunee@kbsi.re.kr)

Possible influences by CO_2 leakage have consititued the biggest barrier to practical carbon capture and storage (CCS) projects. Specifically, the groundwater contamination and its impact on human and environmental health, sound environmental management is required. To secure the public acceptance, the gurantees on the site stability should be taken. And geophysical and geochemical monitoring play a crucial role to provide the data on the behavior of CO_2 and whether CO_2 is released or not. Specifically, geochemical monitoring gives informations on the efficiency of the geological storage, CO_2-water-rock interaction, and long-term fate of CO_2. It is, subsequently, very significant to eastablish the quality management plans on analytical procedures and data reporting for the geochemcial monitoring. To prepare the QA/QC protocols, the firts step is to review and compare the existing analytical methods for individual monitoring parameters. This investigation will provide intuitive method-decision charts as the results, eventually.

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