# Cover letter to the Editor

Manuscript title: Utilisation of Artificial Intelligence based Time-Series Prediction to validate Carbon Containment in Injection Well in Illinois Basin

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Type of Manuscript: Research Article

This manuscript is appropriate for *the International Journal of Greenhouse Gas Control (IJGGC)* as to this authors knowledge, there is a limited pool of information combining engineering, data science and artificial intelligence for time series prediction and forecasting of fields undergoing carbon capture and storage. We primarily think this is due to the lack of publicly available data on how CO2 wells behave once injection begins. We are both practicing energy professionals and hope that our work can be utilized by other like-minded scientists as they attempt to predict injection well behavior and better identify anomalies to ensure CO2 containment in the long run.

We have realized, through this work, that having a holistic understanding of both practical petroleum engineering and data science within the carbon capture and storage realm can either help to derisk opportunities, or at the very minimum, explain why a project may perform in a sub-optimal manner. This makes our work important and the journal the appropriate avenue to publish it.

The manuscript has been checked by a native English speaker with expertise in the field of energy. In this authors opinion, this work would appeal to both a popular audience and scientific audience.

The manuscript, or its contents in some other form, has not been published previously by the author and is not under consideration for publication in another journal at the time of submission. The manuscript does not have any supporting information and/or Review-Only Material.

Yours sincerely,

Dr Munish Kumar

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