


Response to Editor Comments

Title: *Orphaned Oil & Gas Well Methane Emission Rates Quantified with Gaussian Plume Inversions of Ambient Observations*

Manuscript ID: *egusphere-2025-344*

Dear Editor Lok Lamsal and Mario Ebel,

Thank you for your thorough editing. We have made the requested edits to our manuscript and detailed those changes below.

| General Comments: | | |
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| 1 | <p>2) Please ensure that the colour schemes used in your maps and charts allow readers with color vision deficiencies to correctly interpret your findings. Please check your figures using the Coblis – Color Blindness Simulator (https://www.color-blindness.com/coblis-color-blindness-simulator/) and revise the colour schemes accordingly. --> Figs. 4, 5, 10, S5</p> <p>Thank you for the suggestion. We note that our previous scheme was acceptable for most people except those with dichromatic blue-blind. We have used this tool and www.davidmathlogic.com/colorblind to improve our color schemes. Here is a link to the 6-color color scheme that we have chosen and how it appears to different color anomalies: https://davidmathlogic.com/colorblind/#%23D81B60-%231E88E5-%23FFC107-%23004D40-%2347BF99-%23B87A35.</p> <p style="text-align: center;">Color Palette</p>  | |
| Minor Comments | | |
| 1 | L52 | Removed the phrase “in response to this legislation” as requested. |
| 2 | L132 | Removed the following sentence, which was redundant with L103-104: “These venting operations are often how CH4 emissions are estimated to calculate carbon credits.” |
| 3 | L143 | Corrected grammar to “valve to check the consistency of composition” |

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| 4 | L302 | <p>The statement below, as stated in the text, is correct. Faster windspeeds are considered to be more stable. (an additional reference: https://www.ready.noaa.gov/READYpgclass.php)</p> <p>"with class A "unstable" typified by the lowest windspeed and largest dispersion, to class F "stable" having the fastest windspeeds and least amount of dispersion"</p> |
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