

*Response to Reviewer Comment 2 | EGUSPHERE-2023-2097*

**“Long-term legacy of phytoremediation on plant succession and soil microbial communities in petroleum-contaminated sub-Arctic soils”**

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*We would like to thank the reviewer for their thoughtful review of our manuscript. The original reviewer comments are written in **black** and our reply in **blue and italics**.*

The authors have addressed all comments in the original review well and this version is much more clear and impactful.

I just have one small additional note – I noticed in Table S3 that some of the stats for nitrate, P, and K indicate that none of the treatments are significantly different from each other (all “a”) despite vastly different means (e.g. max 158.67 vs. min 1.00 for Crude oil P). Was this an error?

*Thank you for your detailed re-examination of the manuscript. We have verified these statistics, and they are correct as presented in Table S3 -despite the large differences in means, there are not significant differences between treatments for nitrate, P, or K. The data are non-parametric and were analyzed with a Kruskal-Wallis and Mann-Whitney U pair-wise post-hoc test. We agree that because these means are vastly different, one might expect that there would be some significance, perhaps because the test converts data to ranks prior to testing, this method could involve an over correction and therefore the differences are not significant.*