

## ***Interactive comment on “Response of soil microorganisms to radioactive oil waste: results from a leaching experiment” by P. Galitskaya et al.***

**P. Galitskaya et al.**

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Dear Referee, we are very thankful for your comments. Below you will find our answers on them. In attachment, there is the revised manuscript where changes are tracked by red color.

The language is readable and clear, but does contain occasional errors that a native speaker could correct. The manuscript was checked by a native speaker

Although part of the study is somewhat descriptive and could have been condensed, the important information presented clearly merits its publication. Thus, in my opinion, too much attention is put on microbial diversity and identification, keeping in mind that a very small and rather random portion of this diversity is reported. As such, however,

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the microbial results reported are apparently correct – it is their relevance that I question. For example, if general bacterial primers are used, the number of (clear visible) bands in an SSCP or DGGE etc. is not a good indicator of diversity. In very high diversity situations the lane contains so many individual weak bands that they cannot be counted. We stress the diversity issue because it permitted us to reveal the toxic effects not only from oily waste as a mixture from hydrocarbons and radionuclides, but also from the radionuclides alone. You are right, with high microbial diversity in soil we will see only smooth line on the DGGE profile. In contrast, the new dominant species in the polluted samples will be clearly seen. It is exactly our point, when we are reporting about shifts in microbial community in the contaminated samples.

Several instances of the type: according to (Skinner et al, 1995) → according to Skinner et al. (1995) as described by (Galitskaya et al. 1234) → as described earlier (Galitsaya et al. 1234) also correct forms of citing are found: p. 1760, l. 27 mentioning ISO number is not enough. Corrected

p. 1760, l. 16: 95 N? p. 1762, l. 12-14: two independent columns, right? So the repeats within one column are pseudorepeats, which are of some value, but not the same as actual repeats. Yes, two independent columns.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/12/C1634/2015/bgd-12-C1634-2015-supplement.pdf>

Interactive comment on Biogeosciences Discuss., 12, 1753, 2015.

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