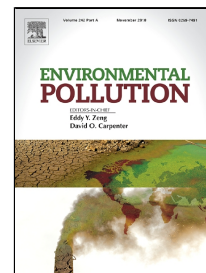


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Implications of co-contamination with aged heavy metals and total petroleum hydrocarbons on the natural attenuation and ecotoxicity in Australian soils

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1 **Implications of co-contamination with aged heavy metals**
2 **and total petroleum hydrocarbons on the natural**
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12
13 **Keywords:** mixed contamination, microbial communities, combined ecotoxicity, TPH
14 and Heavy metals.

15
16 **Abstract**

17 The bioremediation of historic industrial contaminated sites is a complex process. Co-
18 contamination, often with lead which was commonly added to gasoline until 16 years
19 ago is one of the biggest challenges affecting the clean-up of these sites. In this study,
20 the effect of heavy metals, as co-contaminant, together with total petroleum
21 hydrocarbons (TPH) is reported, in terms of remaining soil toxicity and the structure of

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