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(54) **COMPOSITIONS AND METHODS FOR MICROBIAL DECHLORINATION OF POLYCHLORINATED BIPHENYL COMPOUNDS**

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(58) **Field of Search** 435/243, 262.5, 435/6, 7.1, 91.1, 91.2; 530/22.1, 23.1, 24.3–24.33

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(57) **ABSTRACT**

Bioremediative microorganisms comprising a 16S ribosomal subunit nucleic acid sequence and useful in various methods for dechlorinating chlorinated biphenyls (PCBs), including anaerobic dechlorination of ortho- and double-flanked chloro substituents of PCBs. The methods of bioremediation may employ consortia of microbially effective species, e.g., aerobic as well as anaerobic species, to dechlorinate corresponding PCB mixtures containing widely varying and significant numbers of PCB congeners.

26 Claims, 30 Drawing Sheets