EX-SITU SMOLDERING COMBUSTION FOR SOIL REMEDIATION AND/OR OILY WASTE MANAGEMENT

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STARx systems use smoldering combustion for the treatment of contaminated soils and liquid organic wastes. The process is self-sustaining following a short duration, low energy input 'ignition event', such that the energy of the reacting contaminants is used to pre-heat and initiate combustion of contaminants in the adjacent area, propagating a combustion front through the reactor, provided a sufficient flux of air is supplied. This presentation describes a rigorous STARx prototype testing program and the application of STARx for three sites involving: 1) tank bottom residuals and petroleum hydrocarbon-impacted soils; 2) crude oil-impacted sands; and 3) hydrocarbon-impacted fine-grained materials.

STARx can be used for the treatment of excavated soils, drilling muds, or other contaminated soils. In addition, smoldering combustion can be used for the treatment of organic wastes such as waste oils and lagoon sludges when the waste material is mixed with a porous to establish the conditions required for smoldering combustion reactions to take place

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