

RegenOx™

Advanced Chemical Oxidation

Excavation Application

Purpose: Describe the preferred protocol for excavation application of RegenOx.

RegenOx™ is a specialty, groundwater and/or soil remediation product designed to chemically oxidize contaminants upon contact. It is a separately packaged, two-part product consisting of Part-A (the oxidizer complex powder) and Part-B (the activator complex gel). Each part is delivered in easy to handle pails. Part-A and Part-B can be readily mixed together without concern for excess heat or gas generation. RegenOx does not require special injection tools or patented injection processes. For source area contaminant treatment in the saturated zone, RegenOx is typically injected into the subsurface using standard application equipment readily available to the remediation contracting and drilling industry. When treating source area contamination in the vadose zone, RegenOx can be used in conjunction with an excavation removal treatment. The material can be easily applied into an excavation pit to extend source contamination removal from the saturated zone and laterally from the excavation walls into the vadose zone.

First, all personnel within the exclusion zone of the excavation application should have proper Personal Protection Equipment (PPE; Figure 1*). They should have PPE to protect the eyes, respiratory system and skin. *Second*, the recommended dose of RegenOx Part B activator gel should be re-suspended/mixed in the shipping container (Figure 1) and then applied to the excavation pit. The Part B should be distributed evenly and mixed into the soil as well as possible. Care should be taken not to splash the product out of the pit or on personnel. *Third*, the recommended dose of Part A oxidizer powder should be applied to the excavation pit. The Part A should be distributed evenly and mixed into the soil. Care should be taken to avoid fugitive dust emissions or depositing on personnel. *Fourth*, once Part A and B are applied to the excavation, water should be added to the treatment area until standing (saturated), this will enhance the distribution of the RegenOx material. As a final step, clean backfill can be added to the excavation pit.

Photos from a RegenOx excavation application are shown on the following page. RegenOx was added to the pit by using a front end loader (Figure 2) and the excavation was filled with clean backfill (Figure 3).



Figure 1: Proper PPE for RegenOx handling and application.

*All photos courtesy of URS of North Carolina



Figure 2: Application of RegenOx with a Front End Loader.



Figure 3: Photo Documentation of a RegenOx Excavation Application.

3(a) the open excavation pit, (b) adding RegenOx with the front end loader, (c) backfilling with clean soil, (d) the site after backfilling is complete