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Cost-Effective Sampling and Analytical Techniques for PCB Soil Remediations

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PCB soil remediations have historically been quite expensive, not only because of the cost of excavating PCB-affected soils, but also because of the high costs of sampling and analyzing the soils during initial site characterization, pre-remedial sampling, and final verification sampling. Soil sampling and analytical costs have historically been as high as 60% of total remedial costs. Some simple sampling and analytical techniques can reduce these costs to approximately 20% to 30% of total remedial costs.

Topics of discussion include initial site characterization, sampling grid design and installation, sample collection procedures, pre-remediation sampling to delineate the horizontal and vertical extent of contamination, comparison of several screening techniques, verification sampling, sample compositing strategies, approved final verification analysis, and Quality Assurance/ Quality Control. In addition, the potential effects of the proposed "PCB Megarule" on sampling will be discussed.

Sampling and analysis for PCBs is regulatory-driven by 40 CFR Part 761. In addition, the USEPA has published several guidance documents for field sampling for PCBs. The most commonly used guidance document is the *Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup (May, 1986)*. The techniques that will be discussed follow the regulatory requirements and general guidelines published by the USEPA and have been allowed by state regulatory agencies in Louisiana, Mississippi, Georgia, Alabama, and South Carolina.

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