

## **Environmental Footprint Reduction Through Remedy Optimization**

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Federal agencies have focused on optimizing operating environmental remedies, particularly pump and treat systems, for over 10 years with documented results in improving remedy protectiveness, reducing life-cycle costs, and speeding site closure. Although the resulting optimization reports did not document the environmental footprints of these remedies and the potential footprint reductions associated with the optimization recommendations, implementing many of the recommendations result in substantial footprint reductions. Optimization efforts now frequently consider the environmental footprint of the remedy and the potential environmental footprint reductions associated with the optimization recommendations. This presentation reviews historic optimization recommendations, recent optimization recommendations, and recent green and sustainable remediation (GSR) evaluations from the perspective of environmental footprint reduction. The presentation identifies footprint reductions that result from conventional remedy optimization ideas and identifies footprint reductions derived from consideration of sustainability practices. This analysis helps emphasize the role that optimization plays in GSR.