Evaluating Technology Transfer Challenges and Successes: The XRF Case Study

Jed Costanza, Deana Crumbling, Linda Fiedler, Ed Gilbert, and ***Carlos Pachon*** (US EPA, Washington, DC)

Background/Objectives. Over the past decade, a primary focus of OSRTI's Technology Innovation and Field Services Division (TIFSD) has been the advancement of promising state-of-the-art technologies and tools for streamlining and improving the cost and performance of site cleanups and shortening timeframes where possible. These efforts have yielded many successes, yet evolving workforce and extramural resource constraints force us to critically think about how we can better target these resources for optimum results.

Approach/Activities. TIFSD seeks to achieve the best leverage from its investments in technology transfer, technical support and training. All three areas form part of TIFSD's tech transfer efforts, and we are seeking to optimize their alignment for the greatest impact advancing cleanups through innovative practices. To this end we will explore recent tech transfer efforts, and indicators of success, including how our efforts contributed to "mainstreaming" innovative tools and practices.

Results/Lessons Learned. Our analyses suggest that documenting and communicating solid technical performance is not sufficient to ensure acceptance of new technologies by stakeholders, including practitioners, site owners, and regulators. Each may have their own concerns and interests, and the better we understand these the more successful we can be in our efforts to increase their acceptance. A good example is field-portable or handheld X-ray fluorescence, a device for measuring metals and other elements in various media. Even as XRF detection limits and costs decreased, and safety questions were resolved, wide spread use of the tool was still hindered by legacy sampling protocols, inadequate quality assurance, site operations unable to maximize the value to real-time data, and challenging contracting mechanisms. We'll use our experiences with XRF to show how effective technology transfer, technical support and training allow us to significantly contribute to a broad acceptance and innovative uses of new technologies and practices.