

Funding Proposal

Development of a Technology Performance Review Document

Description/Background:

The Superfund program has over 1000 construction completions and a substantial amount of post-construction monitoring and results from five-year reviews. The performances of individual remedy components (e.g., soil treatment) are not well-documented outside the administrative record for an individual site. In addition, ORD, specifically through the Engineering Technical Support Center (ETSC) and the Science and Technology Liaisons, provides technical assistance to the Regions on soil remediation treatment processes and technologies. This work is on a site-specific basis, and often consists of detailed reviews on technology selection based upon ORD experience with how the technology performed at other sites where assistance has been provided. The support is often continued through remedy implementation and post-remedy monitoring with written records. Personnel such as RPMs, remediation practitioners, and researchers could benefit from an assessment of the performance of various remedies across multiple sites and conditions. The material needs to be extracted from these hidden resources in the Regions, and provided in a format that can be developed into a small publication or web-based technology review for quick and easy viewing. ORD could provide a valuable service by disseminating the detailed information on applying technologies while reviewing their effectiveness in different situations.

This unique type of analyses is useful as a feedback mechanism to show the positive and negative attributes that took place during the remedial selection and technology implementation. The purpose of this review is to provide site and soil characterization, post-remediation data and then compare that information with the analyses completed prior to remediation. This provides an evaluation of the performance of the technology at the site, and pinpoints any challenges. This data supplements and updates the type of information that is found in the FRTR Technology Assessment Reports, concentrates more on providing a “value performance analysis”, and establishes conditions and site characteristics where this technology has been most successful and reliable versus where there are limitations. By getting this information, along with actual cost data, the reader can contemplate if this is a technology that is applicable for use at a specific site. As an additional resource, this performance document provides contact information for personnel that have actually applied the technology at their sites, another valuable communication and knowledge-transfer tool.

Expected Outcomes:

Several examples of similar analyses have already been completed by ETSC on a case by case basis and others can be found in regional files. A review of this information at first focusing on highly used soil remedies like solidification/stabilization or soil vapor extraction can produce a pilot or prototype report for that technology. In addition, because of the strong working relationship between the ETSC and the OSRTI Technical Information Program staffs, there could be a request for their assistance in document review. Current ORD and NRMRL publications (Engineering Issue Papers) also made use of the Agency’s Engineering Forum members as part of a review cycle, and this would occur again. The ETSC Director would work directly with the OSP

Science and Technology Liaison, and would request characterization review by the Technical Support Center Director in Las Vegas. Additional collaborations could be achieved on a case-by-case basis in the future.

Cost:

A publication can be put together in about 1 year at a cost of \$30 K.

Proposed Vendor:

One of the ETSC Extramural contracts