Superfund Reform Strategy
Pump and Treat Optimization
OSWER-9283.1-13
??Questions and Answers??

What is this Superfund Reform Strategy? In the *OSWER Directive No. 9200.0-33, Transmittal of Final FY00 - FY01 Superfund Reforms Strategy, dated July 7, 2000*, the Office of Solid Waste and Emergency Response outlined a commitment to optimize our Fund-lead pump and treat (P&T) systems. To fulfill this commitment, Headquarters will assist Regions in evaluating their Fund-lead operating P&T systems. In year one, all Fund-lead P&T systems will be identified, baseline cost and performance data will be collected and up to 2 sites in each Region will be evaluated for optimization potential. This provides EPA an opportunity to continue to operate and maintain our P&T systems in the most efficient manner possible and to demonstrate to Congress and the States our commitment to improve the effectiveness of our remedies.

What does pump and treat (P&T) optimization include? Optimization, as defined in this project, refers to a broad range of techniques to improve the operation, maintenance and monitoring of our P&T systems. The approach used for this project is the Remedial Systems Evaluation (RSE) process described below.

What is a Remedial Systems Evaluation (RSE)? An RSE is a comprehensive, independent expert evaluation of most components of a P&T system including extraction well network, ground water monitoring, data management, labor costs, aboveground treatment systems, etc. An RSE includes a review of site data, a 2-day site visit, and report preparation. The RSE evaluates system effectiveness and explores opportunities for cost reduction and technical improvement. For more information on RSEs and other optimization technologies, refer to the following website: *www.frtr.gov/optimization.*

Why should I perform an RSE at my site? EPA estimates there are over 700 P&T systems selected in Record of Decisions, under design, or operating at Superfund sites throughout the nation. P&T systems can be extremely costly to operate and many are anticipated to operate for decades. Until recently much of our focus has been on remedy selection and construction completion; it is now appropriate we further review long-term operation, maintenance and monitoring issues at all of our sites.

The RSE approach provides a low-cost but comprehensive evaluation of most aspects of a P&T system, and is an excellent first step in continuous improvement of our operation P&T systems. The US ACE and EPA TIO have completed more than 8 RSEs over the past year. In every case, opportunities to improve system performance were identified, and in most cases the potential for cost savings is substantial. For the 2 sites evaluated in EPA Region 5, the potential net lifecycle cost savings was in the millions of dollars. Other opportunities for improvement were also identified, including improved understanding of how a current P&T system is progressing toward achieving the remedial goals, the use

of electronic databases, the use of alternative sampling methodologies, additional source area delineation, reduction of monitoring well networks, developing an P&T exit strategy, and many others. The RSE provides a very thorough overall review of an operating system and the information may be used in preparing a Five-Year Review.

What types of sites will be included in this project? Baseline cost and performance data on all Fund-lead P&T sites (operating or planned) will be collected in the first phase of this project. Only OPERATING Fund-lead sites will be optimized with the RSE process (up to 2 sites per Region).

What additional workload will be required of RPMs? RPMs with Fund-lead P&T sites will be asked to complete a 2-page questionnaire used to gather cost and performance data on their sites. The questionnaire can be completed over the phone with HSI GeoTrans (EPA project contractor) or by completing the questionnaire on a project website. For the 2 sites in each Region selected for RSEs, RPMs will be asked to provide copies of site documents (e.g. Remedial Investigation, Remedial Design, ROD, & O&M reports) and participate in the 2-day site visit. RPMs will also be asked to review a draft RSE report for their site.

The majority of work for RPMs may occur after the RSE is completed. RPMs will be responsible for determining if and how RSE recommendations will be implemented (e.g. install or remove ground water extraction or monitoring wells, perform more site characterization, eliminate or substitute an above-ground treatment component). Some of the recommendations may involve a significant level of effort (install new extraction wells) whereas some will be easy to incorporate (switch from weekly influent monitoring to monthly). RPMs will need to seek assistance with implementation from the Regional technical support personnel, ORD, and EPA Headquarters.

Who will perform RSEs? RSEs are performed by an expert technical team with assistance from the State and EPA RPM, site contractor(s), and Project Liaison (GW Forum or other Regional contact). The expert technical team for this project will consist of three individuals from HSI GeoTrans (the EPA contractor for this project) and/or the US Army Corps of Engineers.

Who will pay for RSEs? All of the RSEs for this project will be funded by EPA Headquarters (OERR and TIO). The Regions will not be required to pay for the RSEs.

What is the anticipated outcome of this project? It is anticipated that suggestions to improve the effectiveness (potential cost increases) and efficiency (potential cost savings) of Fund-lead P&T remedies will be identified. A secondary outcome of this project will be to familiarize Regions with key concepts associated with improved operation and maintenance of our P&T systems.

Who is responsible for implementing recommendations? RSE recommendations will be implemented at the discretion of the Regions. OERR is committed to providing technical and monetary support for implementation of these recommendations. It is assumed that funding for many of the recommendations will come from the On-going Remedial Action budget. Regions will be responsible

for requesting appropriate funding to implement recommendations. More substantial changes to a system requiring additional site characterization may require funding from the Pipeline Operations budget.

Who/what is the Regional Project Liaison? The Regional Project Liaison will most likely be a Ground Water Forum representative or other Regional volunteer who will be the Region's point of contact for the project. The Project Liaison will help Headquarters interface with RPMs in collecting site data and selecting up to 2 sites in each Region for optimization. Also, the Project Liaison will receive updates on baseline cost and performance data on all Fund-lead sites, and they will serve as a Regional technical contact for the RPMs if there are questions on the optimization process.

What will be required of Regional management? We encourage Regions to pay for travel costs for the Regional Project Liaison to participate in the 2-day site visit (in most cases this will mean billing travel to the site). RPMs will need administrative, technical, and monetary assistance with implementing many of the RSE recommendations. We encourage Regional management to support this effort and provide longer-term support and incentives for RPMs to implement RSE recommendations.

What can Regions do to assist with this project? In general, providing information in a timely manner, remaining open to suggestions on how to improve an operating P&T system, and applying some of the optimization concepts to other sites will be extremely helpful. Contact your Regional Project Liaison to inquire how you can assist them.

Who will get copies of RSE reports? A draft RSE report will be sent to the RPM and Project Liaison for review within 45 days of the site visit. A brief summary of the Fund-lead site data and optimization recommendations will be provided to the Superfund Division Director, Regional Administrative Reform Strategy Contact, Project Liaison, and the OERR Center Directors.

What is the year one schedule for this project? We anticipate collecting baseline cost and performance data on all Fund-lead P&T sites by February 2001. We anticipate initiating RSE site visits will begin in January 2001 and end in September 2001.

Where can I go for more information? For more information contact your Project Liaison or one of the contacts listed below.

EPA Headquarters	Regional Project Liaisons	Contractors/US Army Corps of Engineers
Kathleen Yager/TIO 732-321-6738 Jeffrey Heimerman/TIO 703-603-7191 Paul Nadeau/OERR 703-603-8794 Charles Sands/OERR 703-603-8857	R1 - tbd* R2 - Diana Cutt R3 - Kathy Davies R4 - Kay Wischkaemper R5 - Dion Novak R6 - Vince Mallot R7 - Mary Peterson R8 - tbd* R9 - Herb Levine R10- tbd* *tbd - to-be-determined	Robert Greenwald HSI GeoTrans David Becker US ACE Hazardous, Toxic, and Radioactive Waste - Center of Expertise (HTRW CX) Lindsey Lien US ACE HTRW CX