Superfund Reform Strategy
Pump and Treat Optimization
OSWER 9283.1-13
Fact Sheet

Purpose and Goals

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. The goals of this effort are as follows:

- Identify all Fund-lead pump and treat systems in all EPA Regions;
- Conduct optimization analyses at up to 2 Fund-lead P&T systems per Region;
- Increase the awareness of the need and benefit of optimization; and
- Provide a framework for incorporating optimization into the overall clean-up process.

Background

A pilot project was substantially completed in Regions 4 & 5 to determine if EPA would benefit from optimization of our Fund-lead P&T systems and, if so, develop a process by which it could be implemented Agency-wide. The pilot included identification of all Fund-lead P&T sites in Regions 4 & 5 and optimization of 4 sites (2 per Region).

Results of the pilot indicated a tremendous potential to improve our operating Fund-lead P&T systems and a definitive need for continuous evaluation of system operation and maintenance. Recommendations included both suggestions to improve system protectiveness (at additional cost to the site) and improve system efficiency (at reduced cost to the site) at all 4 sites. Opportunities for reducing life-cycle costs by millions of dollars were suggested for both of the sites evaluated in Region 5. Results of the remaining 2 sites have not been finalized.

Optimization Approach

The US Army Corps of Engineers (US ACE) Remedial System Evaluation (RSE) process (www.frtr.gov/optimization/general) is the optimization approach to be used for this project. 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 two-day site visit, and report preparation. An RSE team consists of the following individuals:

- **T** Core technical team of engineers and hydrogeologists [for this project the team will consist of 3 people from HSI GeoTrans (EPA contractor) and/or US ACE]
- **T** Site RPMs (EPA and State)
- **T** Site contractor
- **T** Project Liaison (GW Forum member or alternate Regional contact)

The project will occur in three phases:

Phase 1: Site identification and data collection (HQ, HQ contractors with Regions)
Phase 2: Site optimization (HQ, HQ contractors with Regions)
Phase 3: Project tracking and implementation of recommendations (OERR with Regions)

Required Actions by Regions

Regions will be asked to provide brief cost and performance information on all Fund-lead P&T systems. A 2-page questionnaire will be completed for each site, with assistance from the RPM and HSI GeoTrans (EPA project contractor). Working with the Regions, up to 2 sites in each Region will be selected and optimized. For the selected sites, RPMs will be asked to provide copies of site documents (e.g. Remedial Investigation, Remedial Design, ROD, & O&M reports). The RPM will also be asked to participate in the 2-day site visit and assist with coordinating State and site contractor participation in the visit. A draft RSE report will be prepared for review by the RPM and Project Liaison before a final report is prepared.

A brief summary of the Fund-lead site data and optimization recommendations will be provided to the Superfund Division Director, Regional Reform Strategy Contact, and the Center Directors. Implementation of optimization recommendations will be the responsibility of the Regions, with technical, administrative and monetary support from Headquarters and the Office of Research and Development.

Milestones

Task	Anticipated Schedule
• Regional Briefings (RPMs, Project Liasons, Regional Management)	10/00 - 12/00
• Site Identification and Data Collection (10 Regions - R4&5 completed)	11/00 - 2/01

- Site Optimization (up to 2 in each Region) — 1/00 - 9/01
- Project Tracking — Ongoing through FY01 & 02

Key Contacts

EPA Headquarters	Regional Project Liaison	Contractors/US Army Corps of Engineers
Kathleen Yager TIO Jeffrey Heimerman TIO Paul Nadeau OERR Charles Sands OERR	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 HTRW CX Lindsey Lien US ACE HTRW CX