

# Making Optimization Routine in the Superfund Program

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**June 15, 2004**

# Superfund Pilots Optimization

- In 2000, 88 Superfund-financed pump and treat sites at annual O&M cost of \$35M
- 20 high priority sites selected (based on cost and performance data)
- 20 evaluations nationwide over 2-year period

# Lessons Learned

## 270 recommendations

- 65 related to cost
  - Downsizing treatment plants
  - Reducing operator and oversight labor
  - Reducing process monitoring
- 70 related to protectiveness
  - plume capture
  - indoor air
- Remainder related to site closeout and technical improvement

# Lessons Learned, cont.

- Large potential for cost savings
- One-time upfront investment required to realize savings ~\$6M (for implementation)
- Require follow-up to encourage action on recommendations
- Need for more technical assistance to site managers

# Lessons Learned, cont.

- Program is tracking implementation
- Regions plan to implement 85% of recommendations
- To date ~43% of recommendations implemented
- Cost savings have not been widely realized

# Technical Guides

- Elements for Effective Management of Operating P&T Systems (final)
- Cost-Effective Design of P&T Systems (draft)
- Effective Contracting Approaches (draft)
- O&M Template Report for Ground Water Remedies (draft)

# Technical Guides, cont.

- Capture Zone Evaluation Guidance (draft)
- Inventory of Optimization Techniques for GW Remedies (draft)
- Roadmap to Optimizing Groundwater Monitoring Networks (draft)
- Four more planned FY05

# Superfund Action Plan

- New directive makes optimization routine in the program
- 5-8 evaluations planned each FY with HQ funding
- Regions expected to fund 1 evaluation each year
- HQ's plans to monitor progress
- HQ's will continue to develop new technical guides as needed
- Regions to coordinate with States and PRPs
- Annual report on progress



# Superfund Action Plan, cont.

- Simplify and reduce costs by employing “lite-evaluations”
  - Cheaper, generally omit expensive site visit
  - Potential to address more sites
  - Region 3 considering lite-evaluations at all fund-financed sites as part of a region-based optimization program
- Full evaluation to be conducted at more complex sites

# Related Efforts

- Piloted evaluations at RCRA (5) and UST (3) pump and treat sites
- Findings at RCRA sites similar to Fund-financed sites
- Cost savings at UST sites much lower, but protectiveness issues still identified
- Summary reports under development

# Related Efforts, cont.

- New initiative to continue to promote optimization at RCRA sites
- Goal is to showcase evaluations at 5 RCRA sites with EPA funding
- Long-term goal is for PRPs to fund evaluations at their sites
- Site selection underway

# Related Efforts, cont.

- Partnering with other federal and state agencies
  - AF, Navy, USACE, ITRC, Environmental Security Technology Certification Program
- Internet seminars
- Coordinating focused outreach on long-term monitoring optimization for FY05

# For More Information

- [FRTR.gov/optimization](http://FRTR.gov/optimization)
  - EPA and other agency optimization resources
  - Many links and reports available
- [Cluin.org/optimization](http://Cluin.org/optimization) (coming soon!)
  - EPA optimization resources (guides, summary reports, etc)