Field Demonstration Project
for
Real-time Remediation
of
Surface Water, Sediment, and Soil
at the
Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Citizens Advisory Board Meeting
March 17, 2005

Real-Time Remediation

Three (3) phase remediation approach

1. **Initial Field Characterization**
2. **Removal**
3. **Final Status Survey**

<u>Accomplished in one field mobilization</u>

Real-Time Remediation

Phase I - Initial Field Characterization

- Uses field instruments that are capable of laboratory-quality measurements
- Couples instruments with automated GIS mapping
- Dose-rate surveys
- XRF for metals analysis
- Portable GC/MS for volatiles, semi volatiles
- Hyper-pure Germanium Detector for rads

Real-Time Remediation

Phase II - Removal

- Based on field measurements to identify actual areas of contamination
- Field segregation of waste for disposal

Phase III – Final Status Survey

- Field instruments deployed and samples obtained to verify cleanup goals are met

Basis for Real-Time Remediation

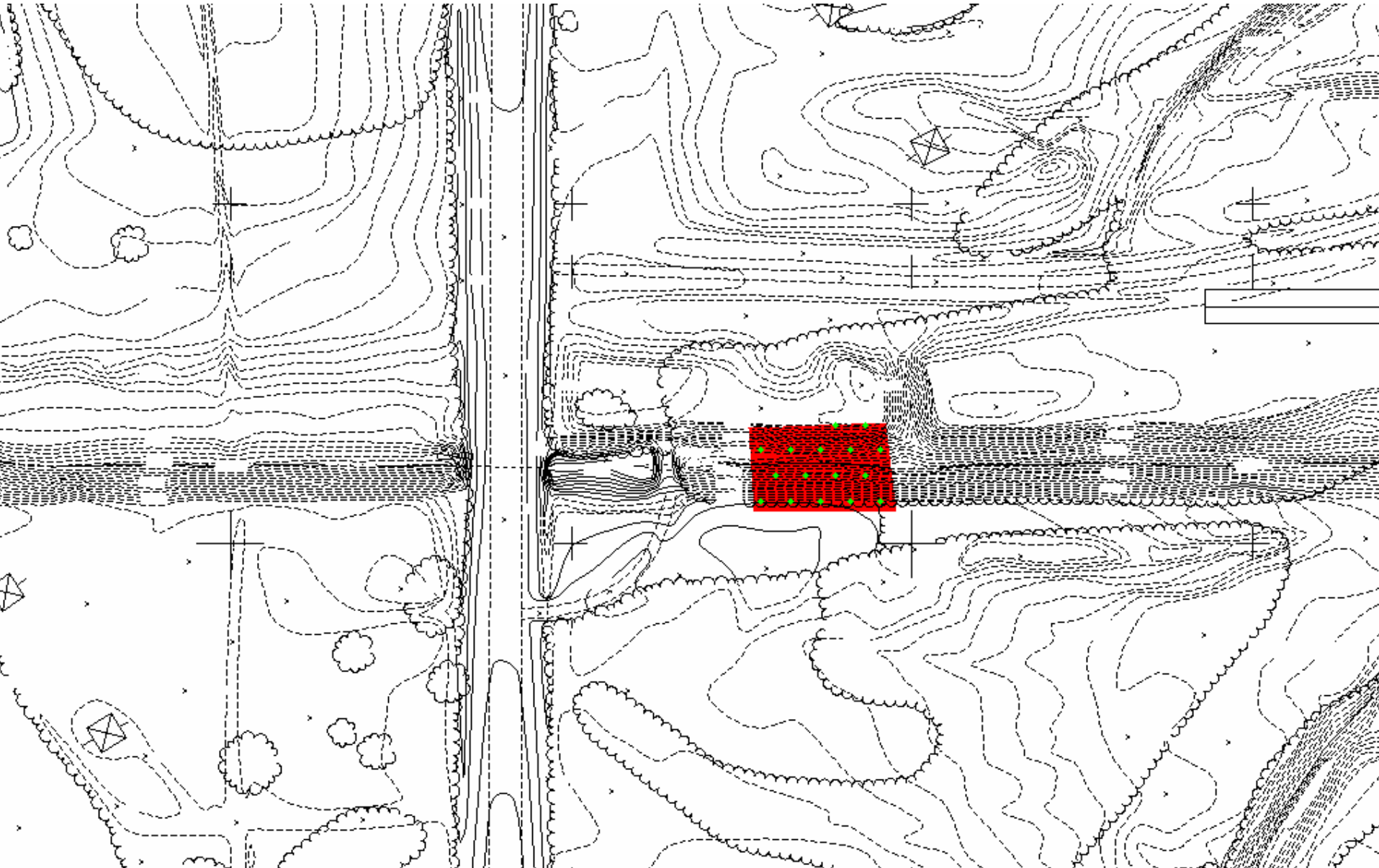
Approach based on

- **EPA's TRIAD Guidance for accelerated site remediation**
- **Argonne National Laboratory's - ASAP - Adaptive Sampling and Analysis Program**
- **Successful at numerous federal and private facilities**
- **Adopted by several states as the standard approach to cleanup**

Real-Time Remediation Benefits

- **One field mobilization to complete vs. months to years for traditional sample – lab analysis-removal cycles**
- **Much greater coverage of area being investigated and remediated than traditional pre-determined sample location methods.**
- **Actually remove contaminated material when it's identified vs. traditional come back to remove a year later (when it's gone downstream)**
- **Real-time cleanup methods reduce costs and accelerate remediation of the outfalls/ditches.**

Outfall 11-Visual Sample Plan



Real-Time Remediation Project Team

KRCEE

Project Management

Argonne National Laboratory

Experience and Resources

Tricord, Inc.

Health and Safety

USEPA Region IV

Regulatory and Project Experience

Kentucky Division of Waste Management

Regulatory and Project Experience

DOE/Navarro Engineering

Site, Regulatory, & Project Experience