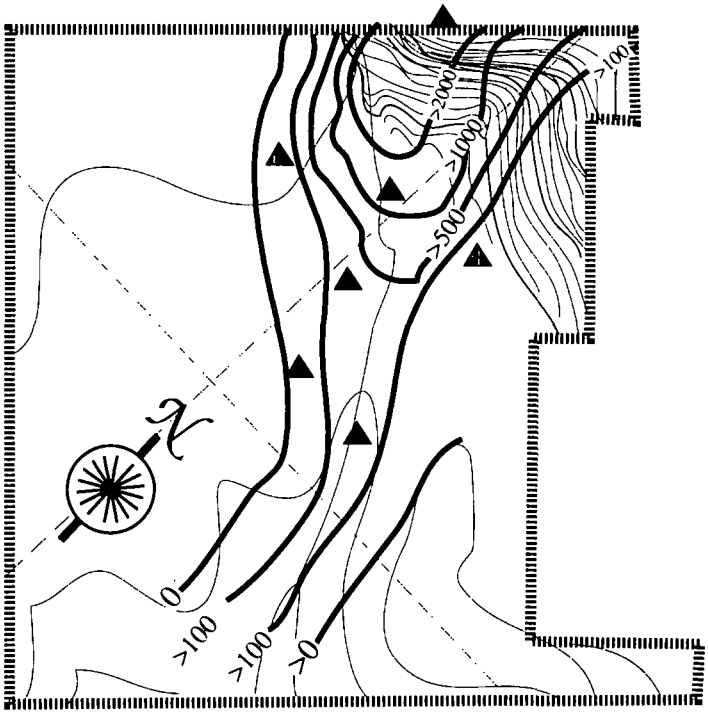
PETREX ENVIRONMENTAL
CASE HISTORY
Plume Tracking



Contamination level of TCE (ppb) based on drill hole sampling and independent chemical analysis of groundwater. (Above)

▲ Monitoring Wells

TCE Contamination in ppb.

Area of defined hydrogeologic control

PETREX Survey Objectives:

1. Determine the pattern of TCE surface vapor flux over an area of contamination previously defined by drilling and groundwater analysis.
2. Determine the direction and extent of migrating TCE plume outside this area.
3. Provide a basis for future evaluation of remedial action.

SURVEY DESIGN:

Regular grid-280 Samples on 100' spacing

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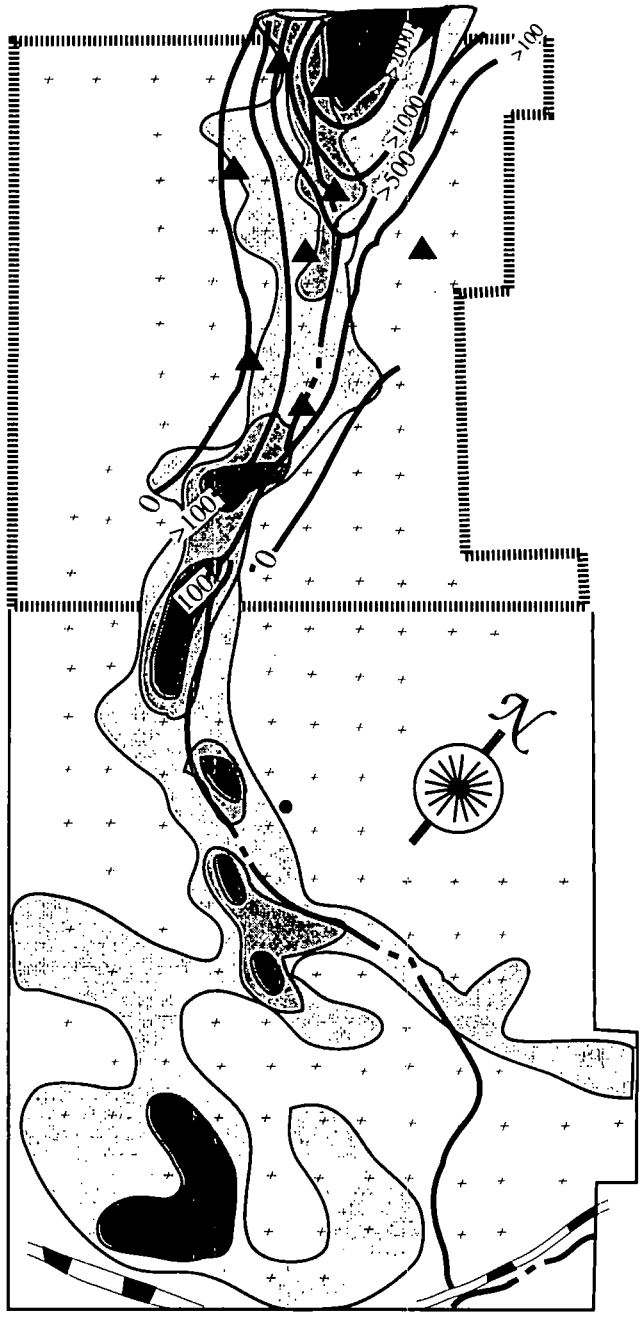

Relative TCE flux in soil derived from PETREX survey (Overlain on groundwater contamination data). Map extended to show **PETREX** *survey and subsequent monitoring wells drilled on* **PETREX** *data confirming TCE contamination in groundwater. (Above)*

Relative TCE flux

High

Medium

Low

Petrex Collector Locations

▲ Groundwater monitoring wells prior to **PETREX** survey

● Groundwater monitoring wells drilled after **PETREX** survey confirming TCE contamination in groundwater.

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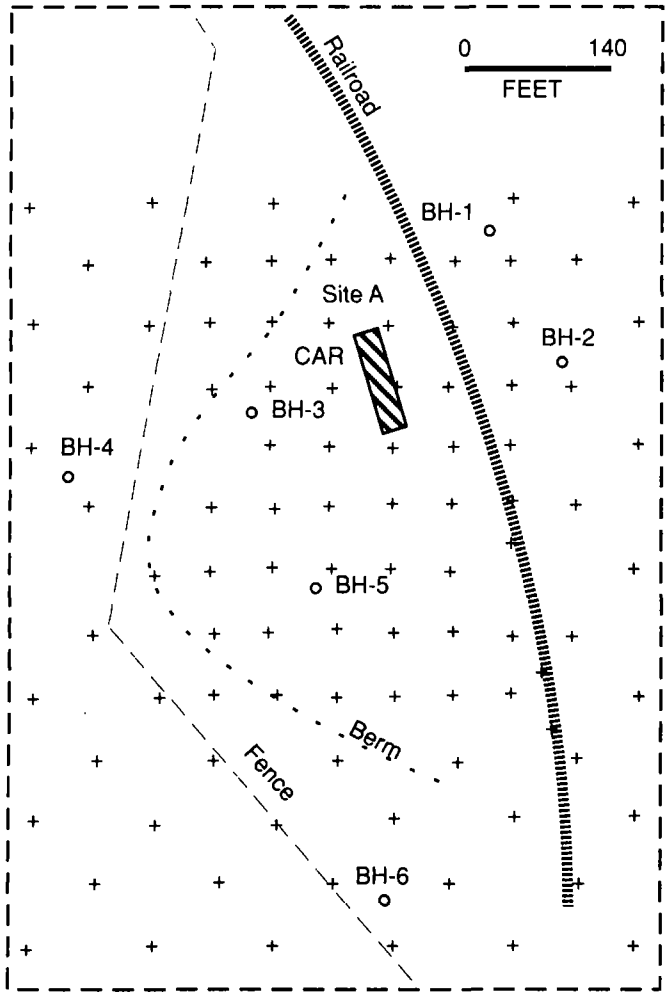
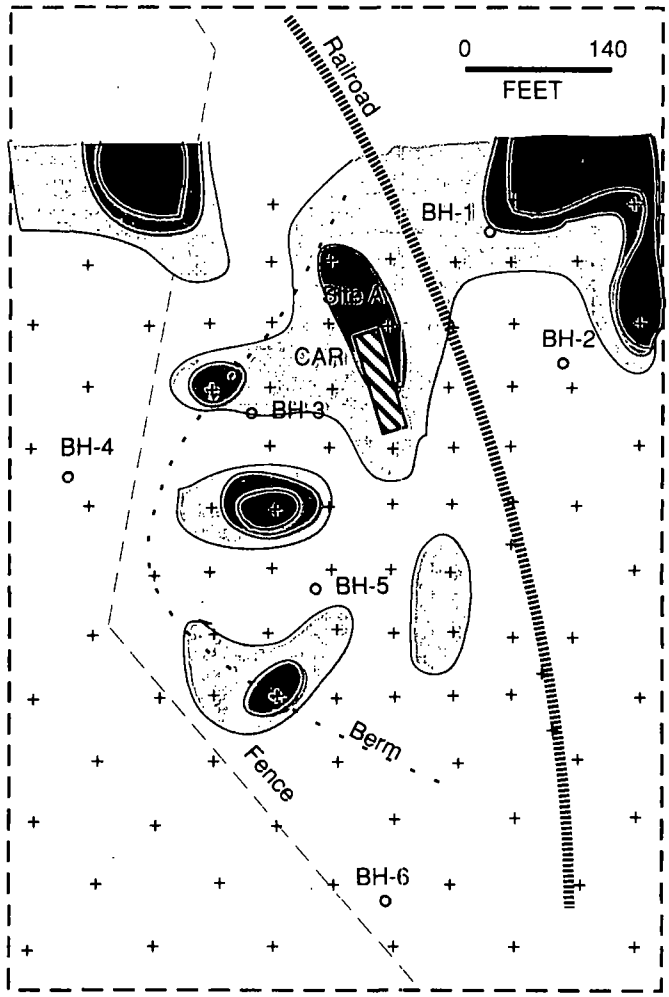
PETREX ENVIRONMENTAL
CASE HISTORY
Phenol Spill



In the early 1970's a railroad tank car containing 30,000 gallons of phenol was overturned in an accident causing a rupture and a partial spill. The tank car was buried at site A.



The Petrex survey shows highest flux at the burial site and in several pockets in the near vicinity. The high zone to the east of the track was explained by the client as being the spot where the tank car first overturned. It was moved to the west for burial.

PETREX Survey Objectives

a) Confirm the location of burial.

b) Determine the extent of migration of phenol in the area.

Depth to water table—10 feet

SURVEY DESIGN: 100 Petrex collectors placed in a variable spaced grid (50 feet–100 feet).

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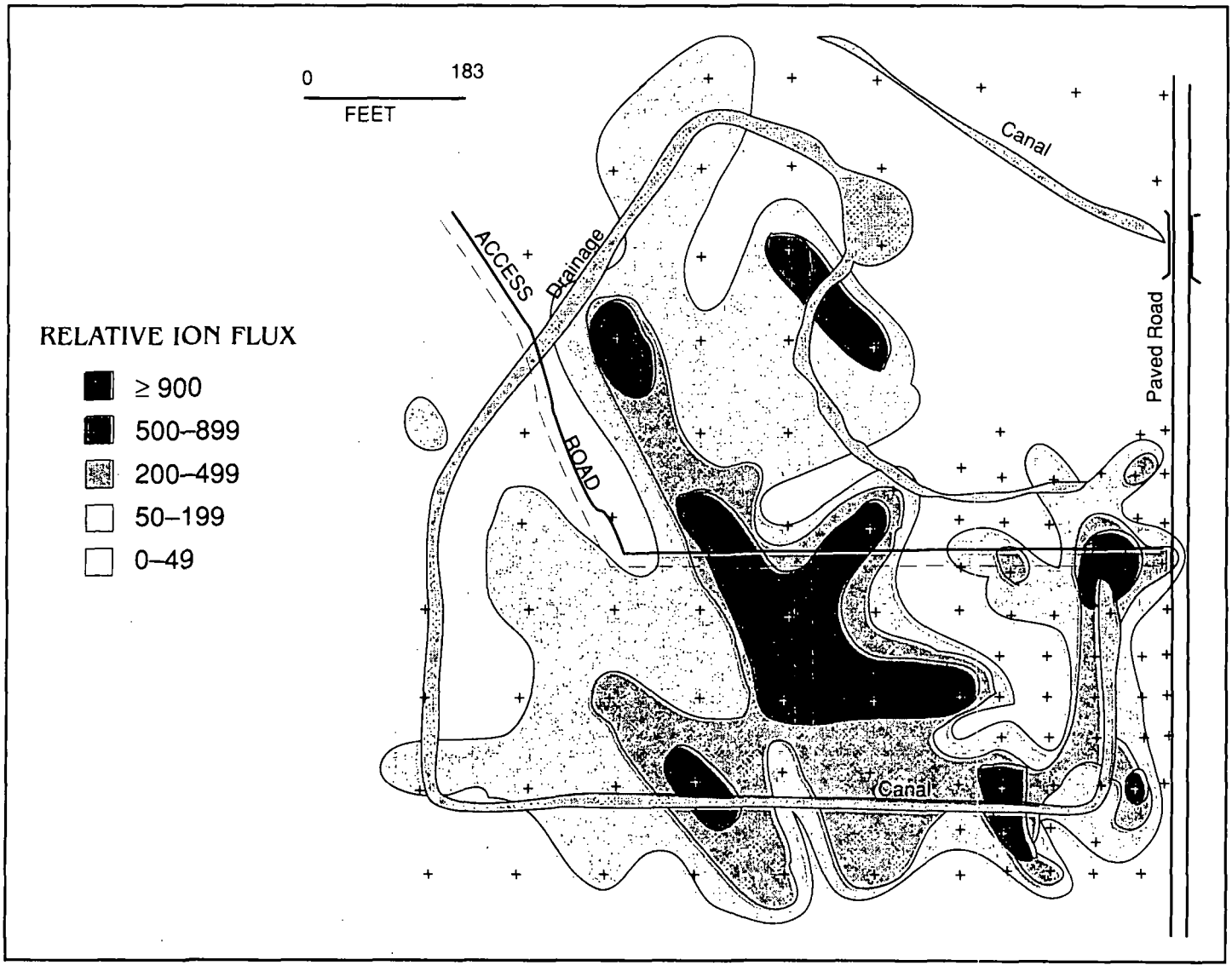
PETREX ENVIRONMENTAL
CASE HISTORY
Landfill



PCE surface flux as determined by a Petrex survey in and around a landfill in southeastern U.S. (See survey objectives below). Survey was followed by remedial investigation which verified anomalies.

Depth to ground water—10 feet

PETREX Survey Objectives:
a) Determine zones of highest PCE flux in the landfill area.
b) Determine the extent of PCE migration.
c) Define migration pathways.

SURVEY DESIGN: 175 collectors placed on a variable grid pattern (50–125 feet)

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