

# **West Side Corporation Site Soil Cleanup**

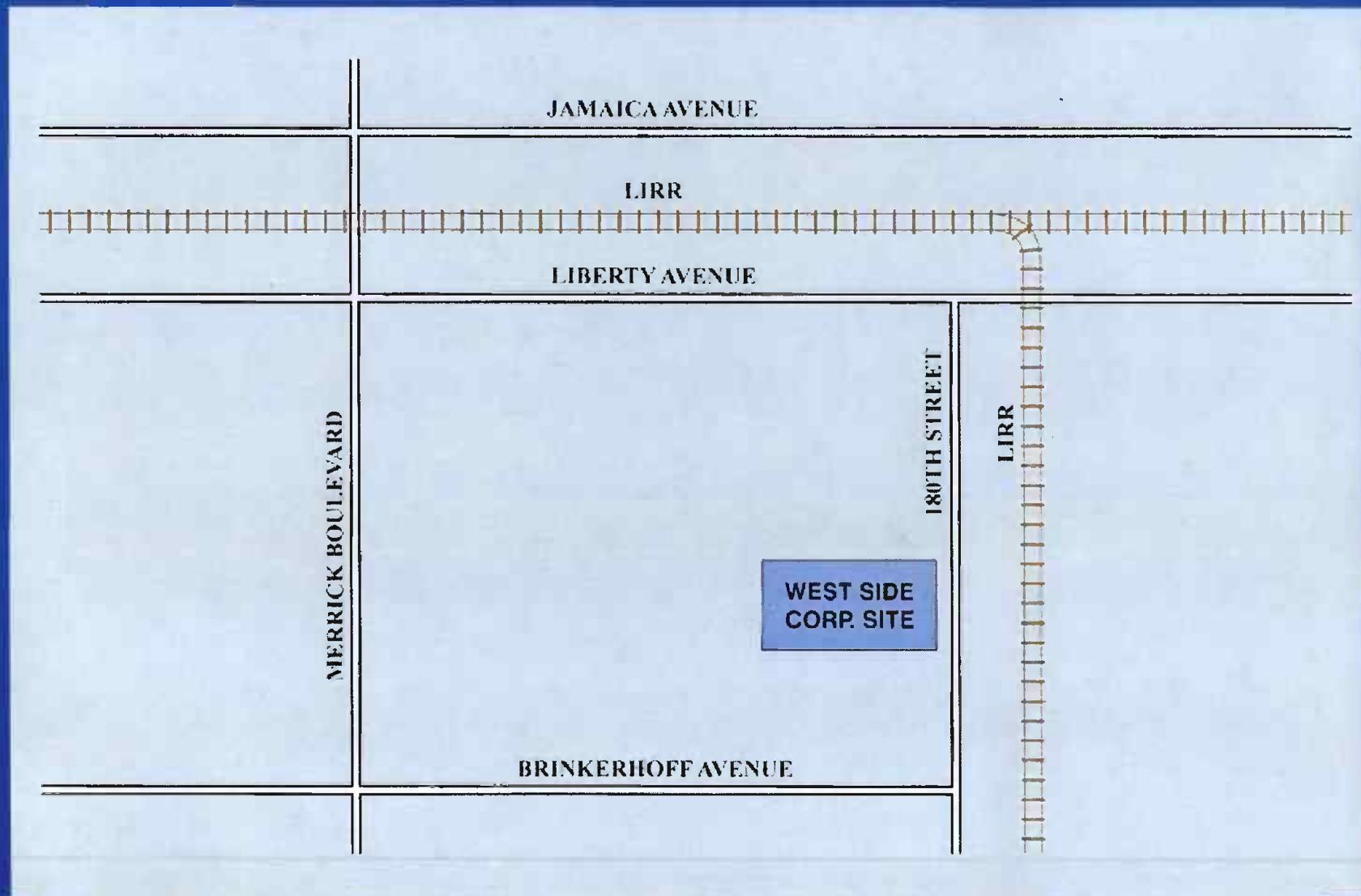


**New York State Dept. of Environmental Conservation  
New York City Dept. of Environmental Protection  
Clayton Services Group/Thermal Remediation Services  
URS Corporation**

# What is being presented?

- **What are we cleaning up?**
- **What can we expect to see?**
- **How long will this take?**

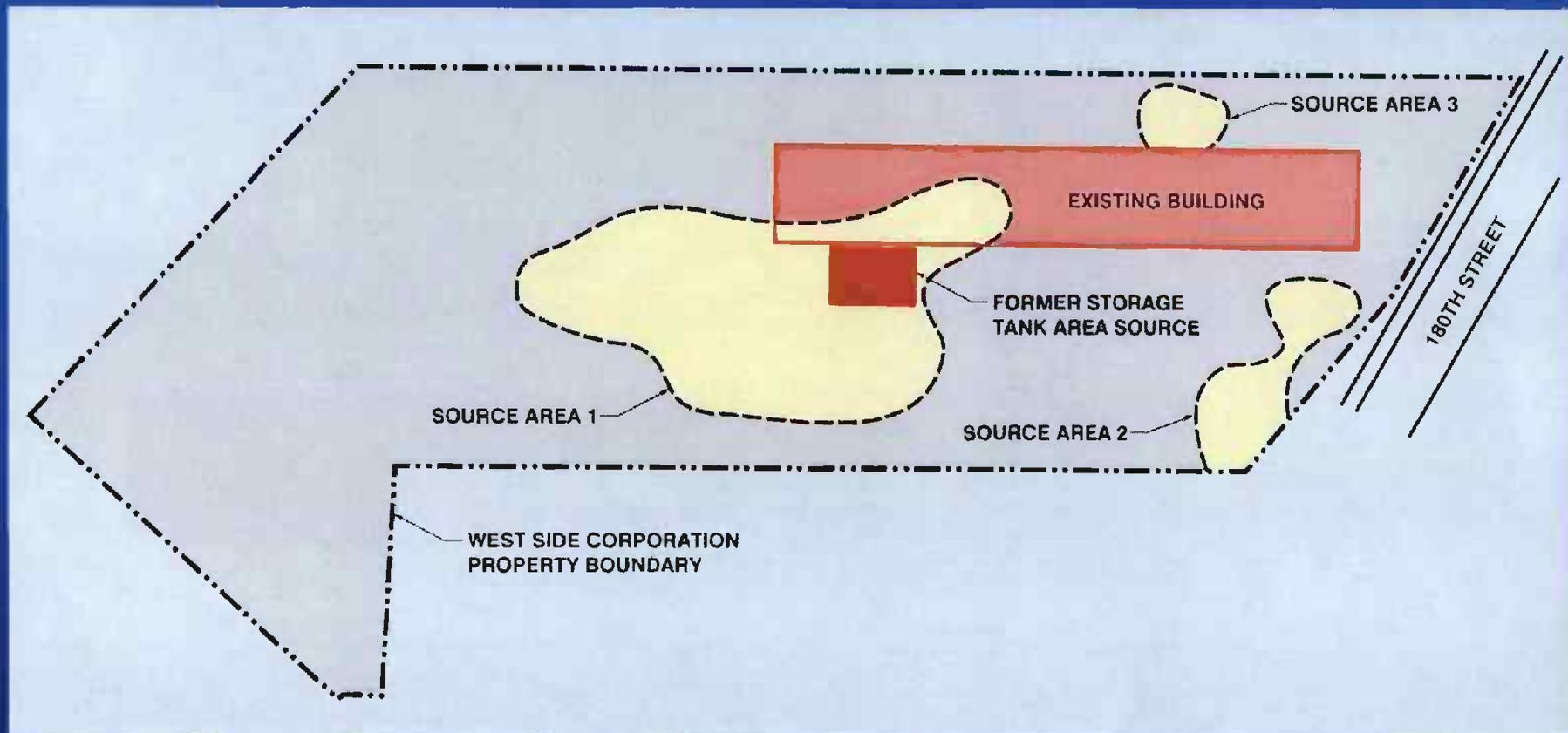
# Where is the West Side Corporation Site?



# **How and Where was the West Side Corporation Contaminated?**

- **West Side Corp. distributed “perc” (dry cleaner fluid)**
- **Storage tank spills/leaks, releases perc to ground**
- **Most contamination still in former tank area**
- **Some perc vapor in the soil away from tank area**
- **Groundwater away from West Side Corp. has perc, but at much lower levels**

# Where are the Source Areas?



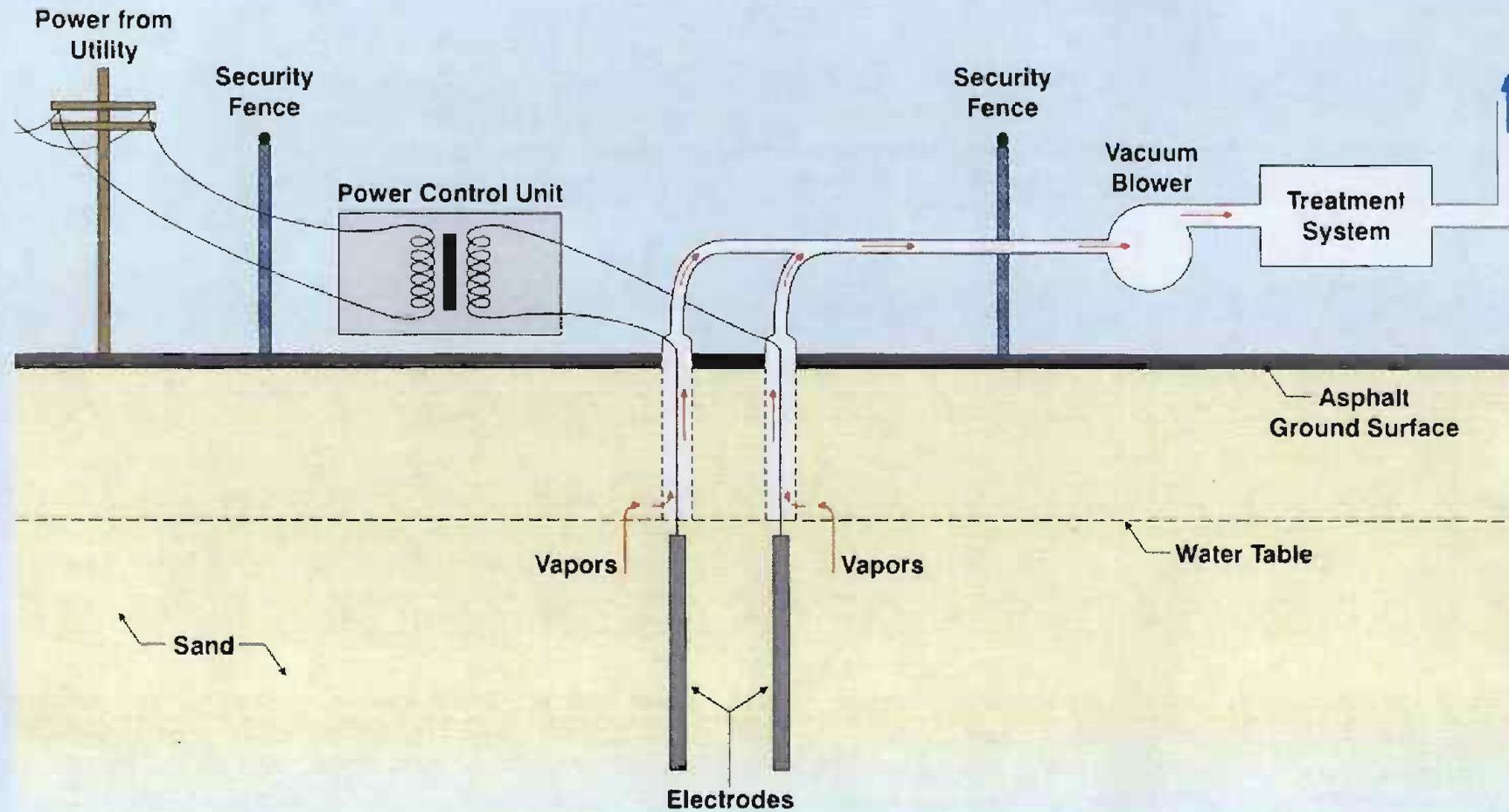
# What Will Current Project Accomplish?

- **Project starting now will clean up former tank area**
- **Project will take most of perc below former tanks out of ground**
- **Perc vapor away from tank also to be removed**
- **Perc in groundwater to be addressed by next phase of project**

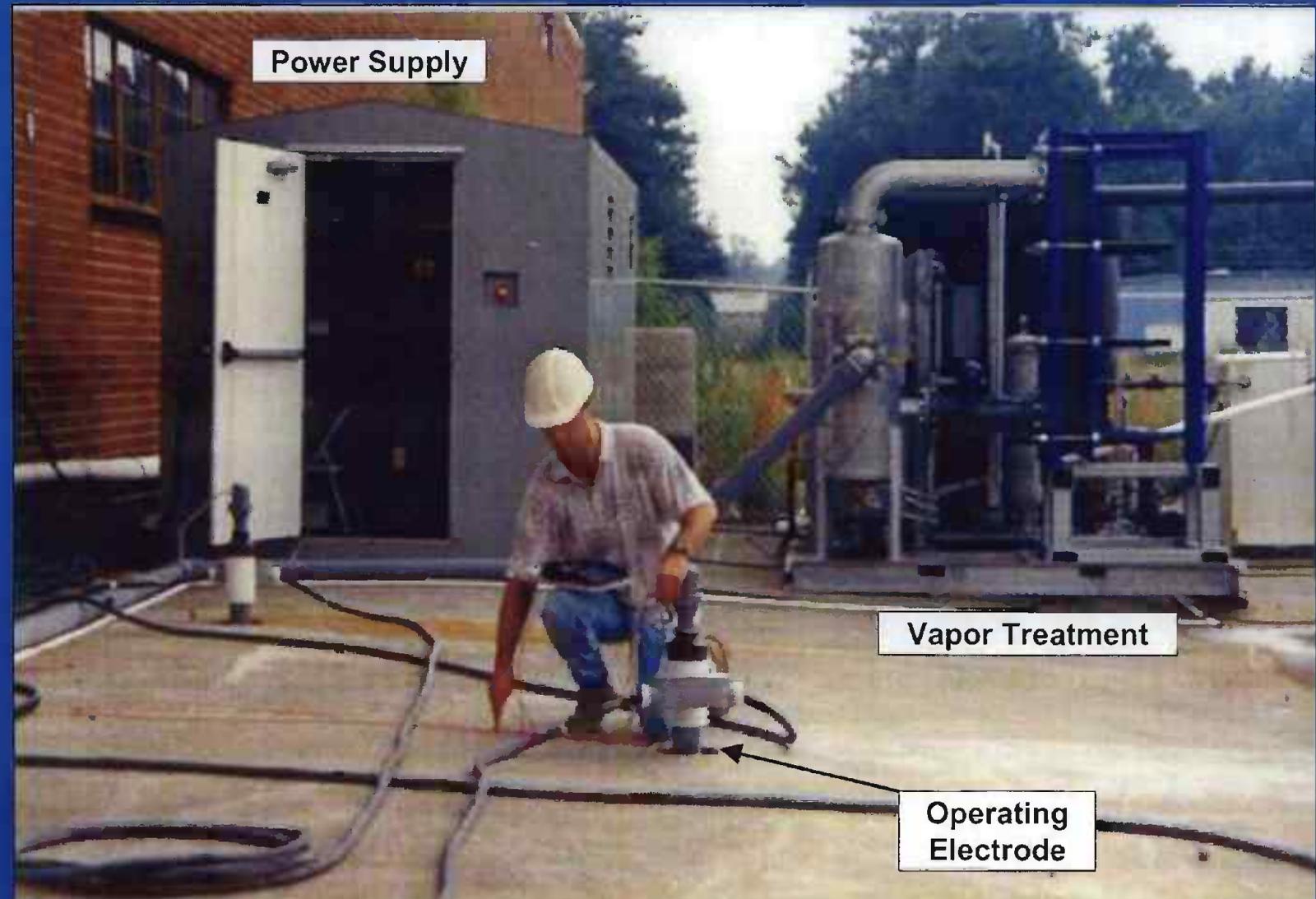
# What Technologies Will Be Used?

- **In Place Treatment**
  - **Electrical Resistant Heating (ERH)**
  - **Soil Vapor Extraction (SVE)**

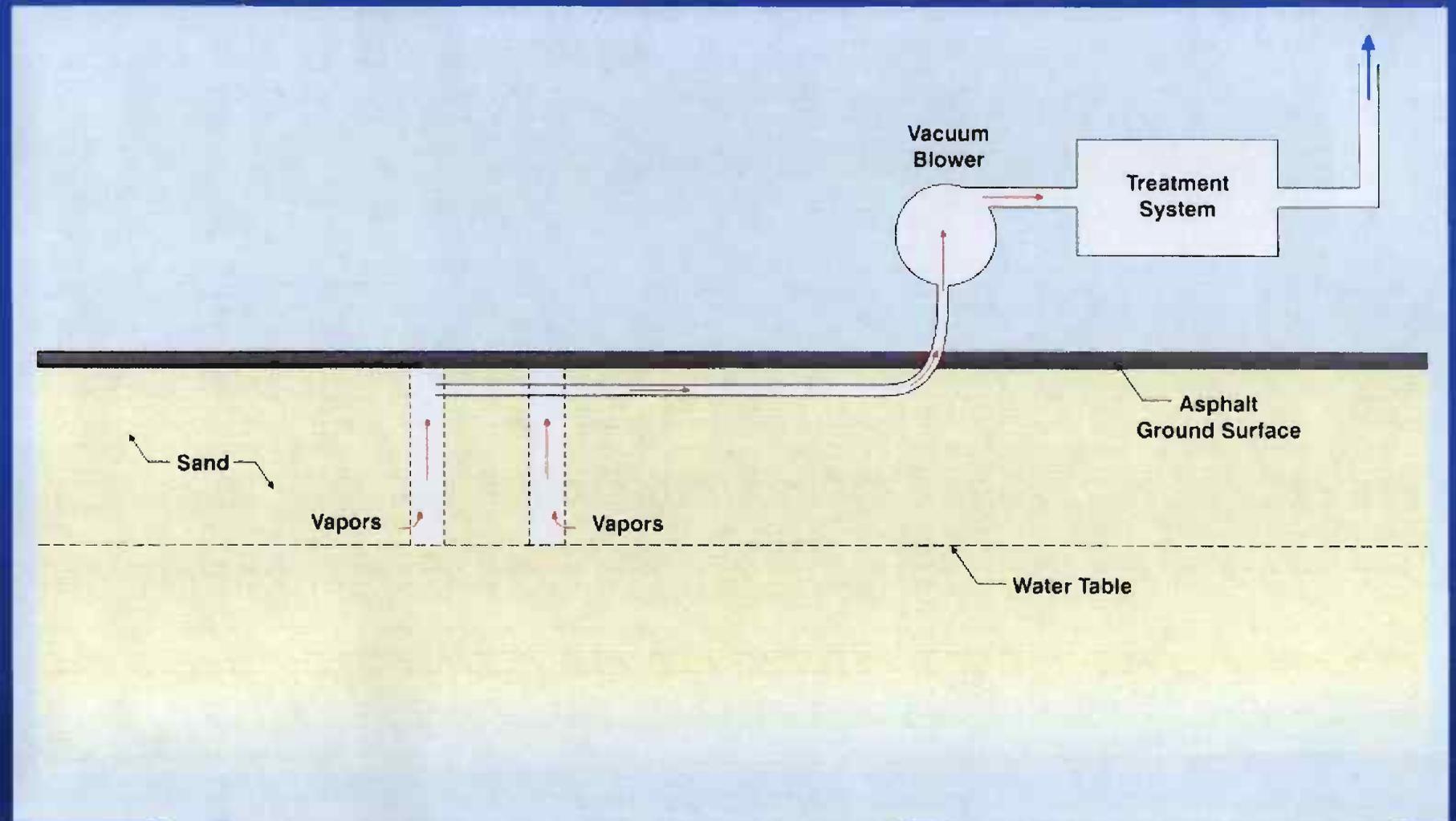
# What is Electrical Resistance Heating?



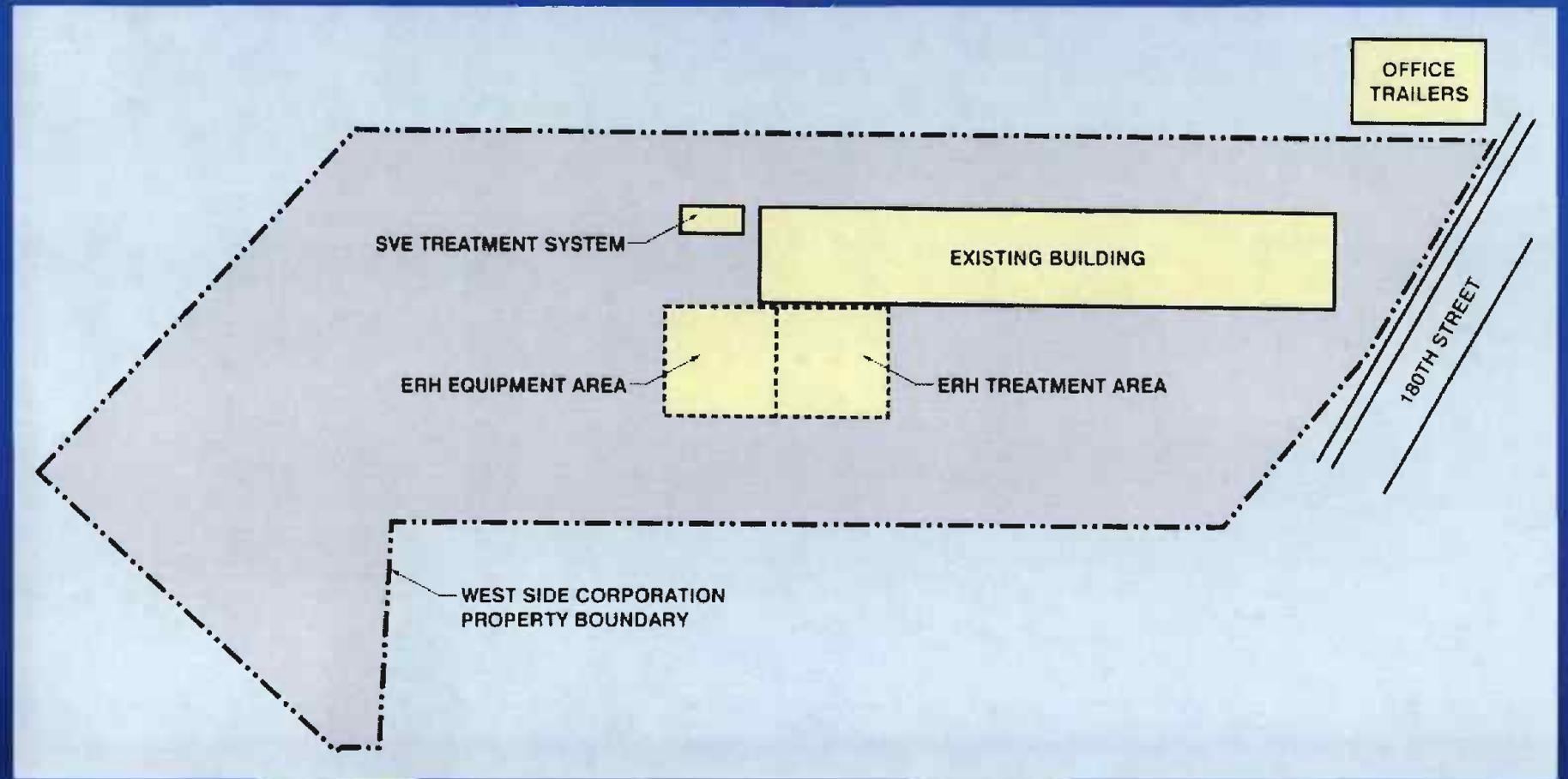
# What Does ERH Look Like?



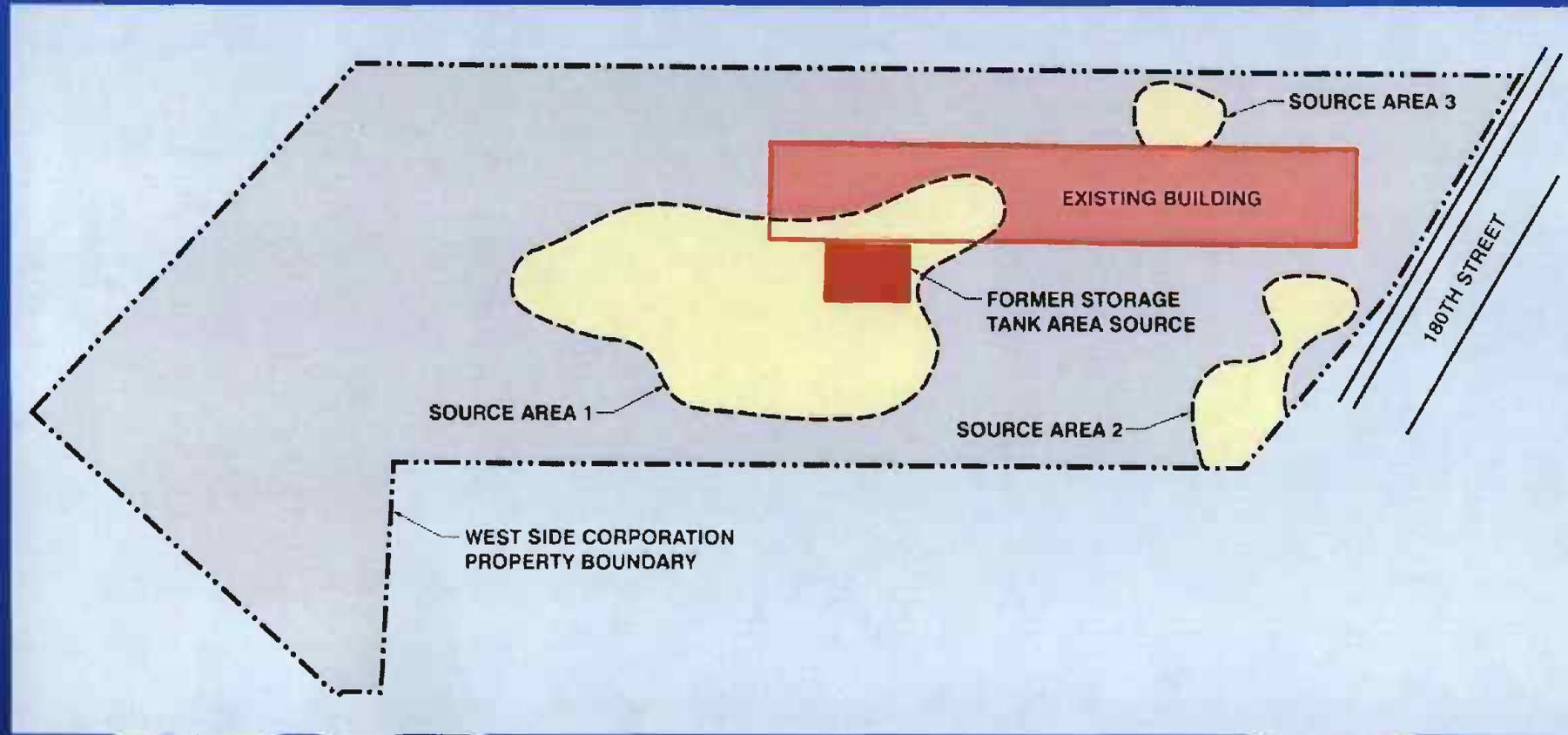
# What is Soil Vapor Extraction?



# Where is the Equipment?



# West Side Corporation Source Areas



# What are the Community Impacts?

- **Community Protection**
- **Work Hours**
- **Staffing**
- **Security**
- **Truck Traffic**
- **Responsiveness**

# What Other Activities Will Occur?

- **Activities With Current Project:**
  - Sampling
  - Longer term SVE
- **Activities with Off Site Project (after ERH)**
  - Groundwater Plume Removal

## **How Long Will the Project Take?**

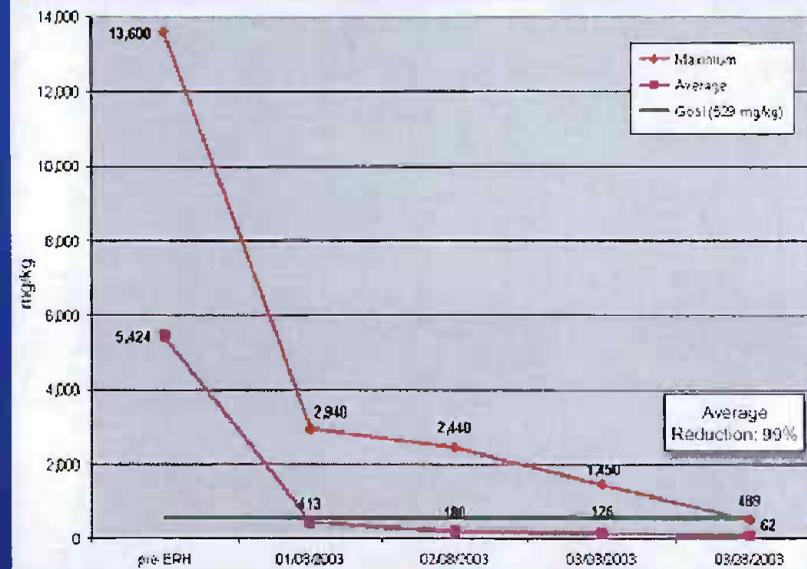
- **Set up system: 2 months (Jan./Feb. 2005)**
- **Operate ERH system: 6 months**
- **Sampling after treatment: 2 months**
- **(Optional) second treatment: 2 months**
- **SVE: up to 24 months following ERH**

# Successful ERH Applications

## Thermal Remediation Services Project Experience - 2000 to 2004

Site Name	Initial Maximum Concentrations of Contaminants of Concern	Operations Period	Cleanup goals
Confidential Client, Illinois	53,000 mg/kg TCE	Sept - Nov 2004	Cleanup goal was exceeded. All confirmatory samples showed a 99.9999% reduction as compared to pre-ERH soil samples. Confirmatory soil
Lowry Landfill, Denver, CO	Xylene LNAPL in the So. Waste Pit; PCE DNAPL in No. Waste Pit.	2002 - 2003	An average 50% reduction in xylene concentrations in soil and groundwater was achieved.
Air Force Plant 4, Fort Worth, TX	TCE DNAPL 95 mg/L TCE; and 91 mg/kg TCE in soil.	Spring '02 - Winter 2002	Average 90% reduction in TCE concentrations in soil and an 87% average reduction in TCE concentrations in groundwater.
NAPL Area 1, East Gate Disposal Yard, Ft. Lewis, WA	TCE DNAPL and NAPL	2003-2004	Contract specifications regarding subsurface temperatures in the vadose and saturated zones were met. Over 2,000 kilograms of TCE were removed from NAPL Area 1.
Site 3 - NWIPR, Bedford, MA	TCE	Spring - Summer 2003	95% reduction in total VOC concentrations in groundwater
Site 4 - NWIPR, Bedford, MA	Benzene	Spring - Summer 2004	50 µg/L
Washington, NC	TCE 7,860 µg/kg	Spring - Summer 2003	50% to 99% reduction of contaminants of concern in soil and groundwater.
Commercial Retail Site, Western Springs, IL	PCE 13,600 mg/kg; 1,400 mg/kg	July 2002 - March 2003	The cleanup goal was exceeded. We achieved an average 99% reduction in PCE concentrations in soil or 62 mg/kg.
Manufacturing Facility, Paducah, KY	TCE DNAPL - 1,000,000 µg/L and 664,570 µg/kg	Install Completed; Operations Spring 2003 - for 130 days	75% reduction in average TCE concentrations in groundwater and soil.

# ERH in Populated Areas



Maximum and Average PCE Soil Concentrations vs. the Cleanup Goal.