

# Kansas Department of Health and Environment

## Bureau of Environmental Remediation, Remedial Section

### State Water Plan Contamination Remediation Program



## Winfield Former Manufactured Gas Plant

### Background:

The Winfield Former Manufactured Gas Plant (FMGP) produced coal gas from 1884 through 1916, with production between 4 and 10 million cubic feet of gas each year. The production of coal gas leads to various byproducts and residuals, including metals, cyanide compounds and coal tars containing volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Investigations of the site conducted by the Kansas Department of Health and Environment's (KDHE's) State Water Plan Contamination Remediation Program indicated the presence of these compounds in surface and subsurface soils. To determine options for remediating the site, a Corrective Action Study was initiated in April 2002. Options considered included excavation with off-site disposal, capping the site or encircling the area with a barrier fence.



*Excavation Activities*

### Solution:

KDHE determined that most effective cleanup option would be limited excavation combined with an engineered vegetative cap and geotextile marker. In May 2005, a small area was excavated at the north of the site where PAHs exceeding non-residential risk-based standards existed in the surface and near surface soil. The excavated soil was used to fill low spots in the southern half of the site, where surface soils exceeded non-residential RSK levels. Concrete foundations removed from the southern portion of the site were used as fill in the excavation. The excavation was then topped off with clean fill and six inches of gravel. The southern portion of the site was leveled, a geotextile fabric placed over the area, and six inches of topsoil spread over the fabric. The soil cap was seeded with Bermuda grass. Two Environmental Use Controls, one for the south of the site which prevents disturbance of the vegetative cap and restricts its zoning to non-residential use, and one for the north of the site which restricts its zoning to non-residential use, are being placed on the site.



*Curlex Erosion control blanket covering capped area*

### Benefits:

- Risk of dust-borne contaminants eliminated.
- Environmental Use Controls in place to restrict use to non-residential purposes.
- 150 cubic yards of contaminated soil excavated and capped.
- One acre of land made available for commercial redevelopment.